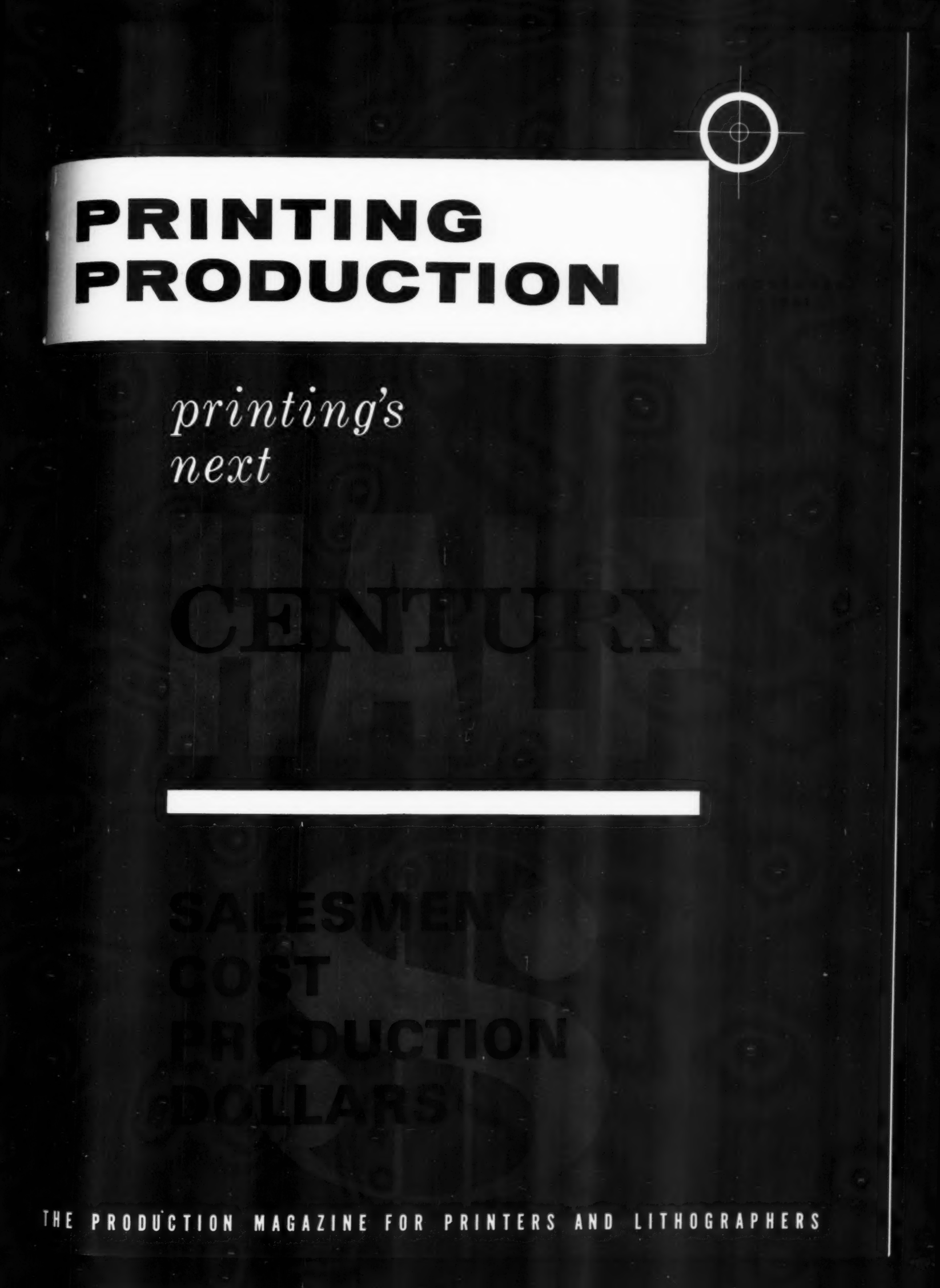
PRINTING PRODUCTION

printing's next



THE PRODUCTION MAGAZINE FOR PRINTERS AND LITHOGRAPHERS

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For More Information Circle 188 on Reader Service Card

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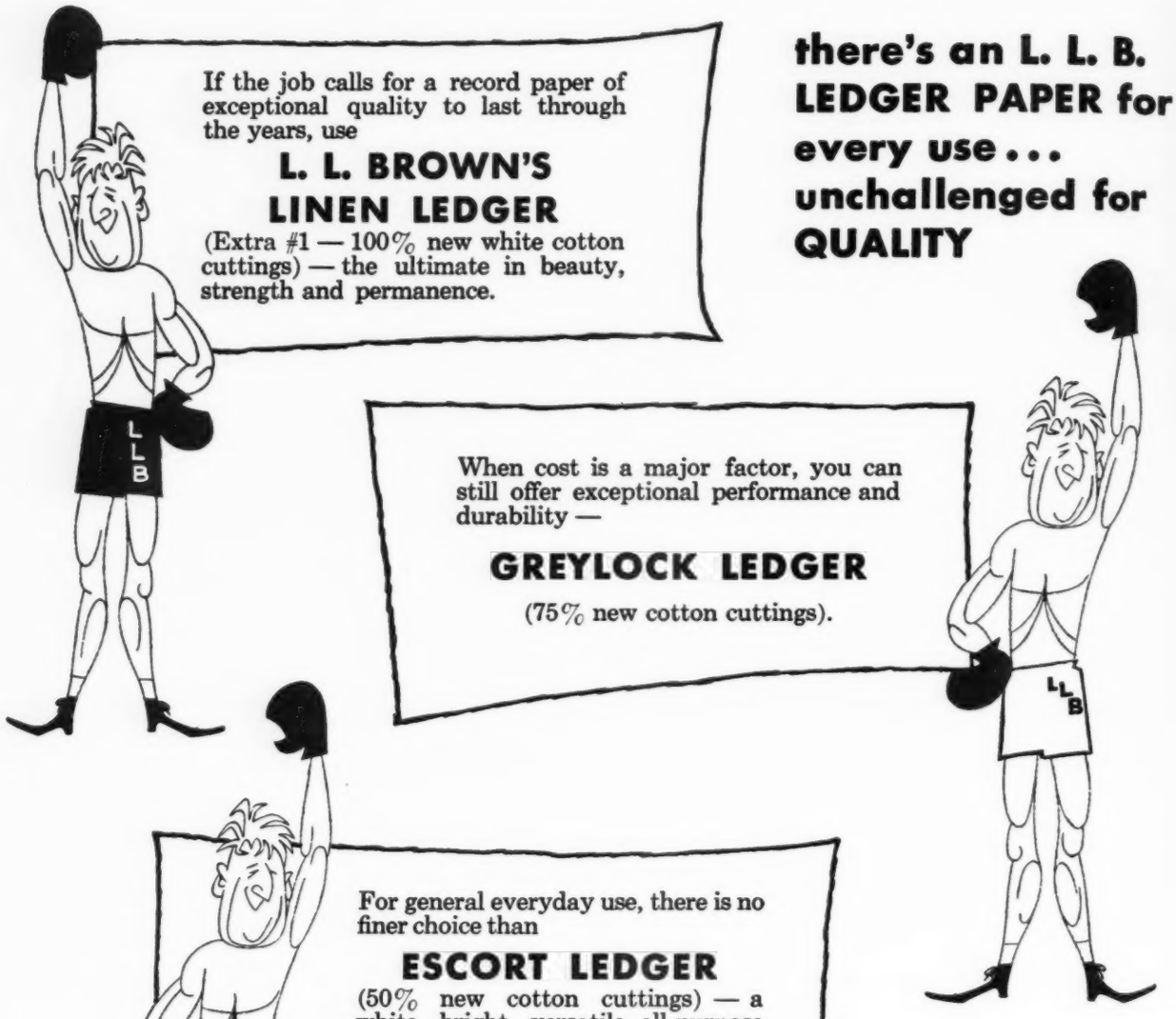
3 champs THAT OUTCLASS ALL OTHERS



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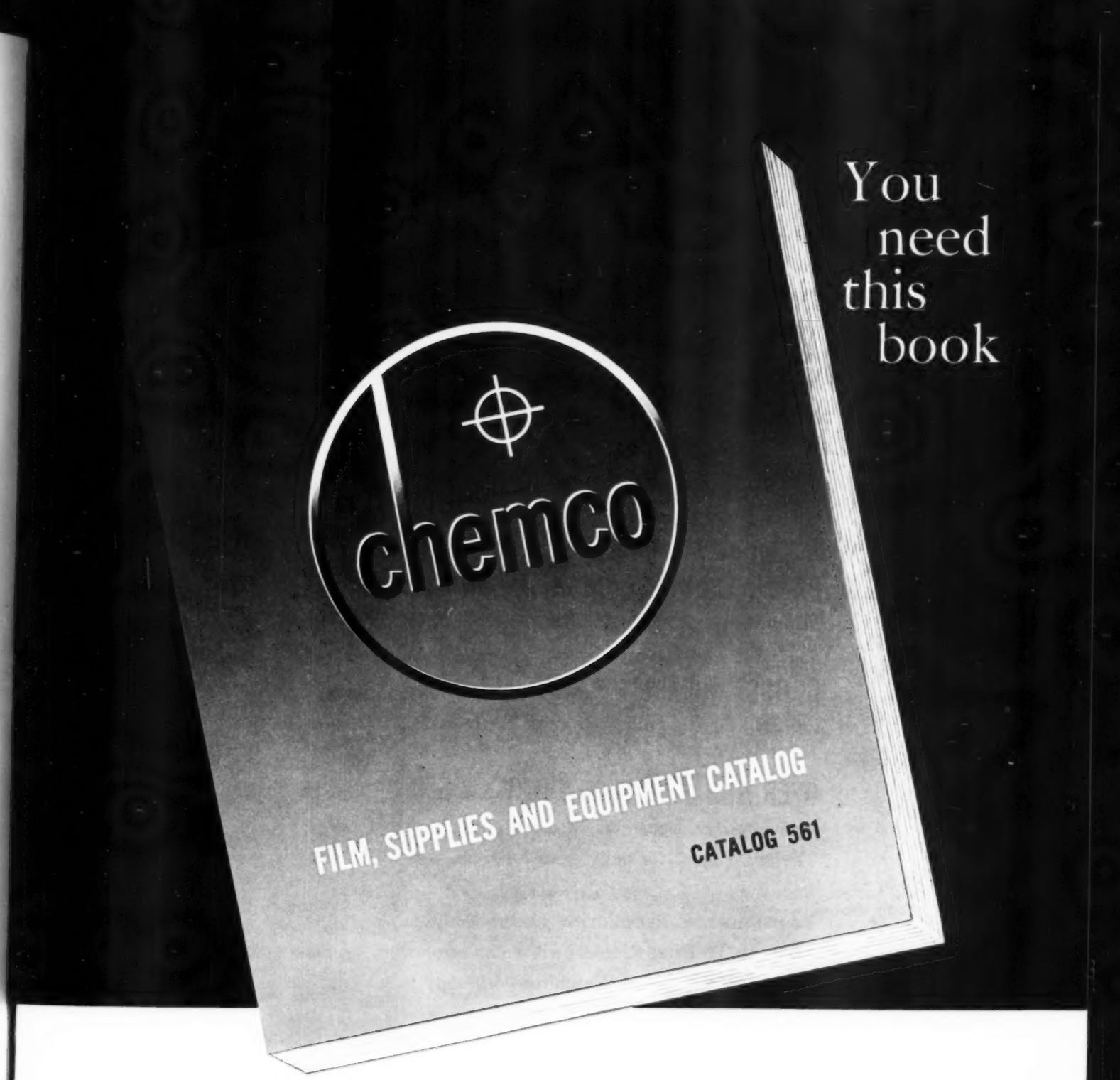

Chemco's new 100-page catalog shows the products of over 200 graphic arts manufacturers

By any standard, Chemco is unique in the field of photomechanical reproduction, We're a manufacturer of our own fine products. We're a dependable supplier of products from other distinguished companies. Nine Chemco warehouses provide quick service and delivery of Chemco films, chemicals, cameras and equipment as well as the products of 200 other companies.

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—an alphabetical listing of more than 1,100 companies—3 times more than listed in any other printing industry buying guide!

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NOVEMBER 1961
VOL. 92, NO. 2

PRINTING PRODUCTION

Published especially for management, production and mechanical executives responsible for printing production and the specification of equipment and supplies used in all major processes of the Graphic Arts industry.

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THE COVER this month calls attention to two significant features of the issue—*Salesmen Cost Production Dollars* and *Printing's Next Half-Century*. Though both stories are specially written for the readers of *Printing Production*, each author has chosen widely diverse subjects for his composition. One writer, Glen F. Oster, documents some experiences of printing plant superintendents who recall salesmen's actions which have cost profit dollars to their company. In the other story, Gyan P. Madan turns forecaster in predicting changes in printing in the next 50 years. We think both stories are important and recommend them for your reading.

LETTERS
TO THE EDITORS

Some Sharp-eyed Readers

I am sure the picture on page 108 of your September issue shows Warren L. (Dusty) Rhodes and Al Davis of Rochester Institute of Technology. If it does not then this is the most fantastic likeness of them I ever did see.

Later: Never mind! I see what happened. I just looked through the rest of the page and noticed that you have a couple of cuts transposed.

Mike Blobstein
World Publishing Co.
Cleveland, O.

I see the big boys make them too.

Paul J. Dwyer
Redfield & Company, Inc.
Omaha, Neb.

Hey!!!
Doris Hall
Printing Industry of Washington, D. C.
Washington, D. C.

It's inevitable!

Donald E. Sommer
Printing Industry of America
Washington, D. C.

EDITOR'S NOTE: The above readers, of course, took us to task for our September *Graphic Views* boner in which two cuts mysteriously changed position on the page. No matter how it is explained it would still sound like an alibi, so suffice it to say that we are pleased that so many watch our *Graphic Views* page and our apologies to Messrs. Rhodes, Davis, Sommer and Hennage, the people involved in the mix up.

Story, Cartoon Make Hit

We would like permission to reprint the September 1961 issue article, *Hot Metal Pasteup for Ad Composition* by Allan M. Woods.

We would like to make about 5000 reprints for distribution to our local unions throughout the U. S. and Canada, and especially to our New Processes Committees in most of the local ITU unions.

Frank Cremonesi, Administrator
ITU Training Center
International Typographical Union
Indianapolis, Ind.

SAW IN SEPTEMBER ISSUE OF PRINTING PRODUCTION CARTOON RE TWO MEN WORN TO FRAZZLE WITH CAPTION REGARDING ANOTHER RUSH ORDER. WOULD LIKE TO USE SAME FOR MONTHLY ADVERTISING. NEED PRINT SUITABLE FOR REPRODUCTION.

Glen Starkey
Starkey Printing Co.
Chattanooga, Tenn.

Permission is requested to reproduce the cartoon appearing in your September issue (page 102) to be used for internal distribution.

K. L. Bailey, Jr.
General Electric Co.
Johnson City, N. Y.

"Good work men! Now, about that other RUSH job that came in this morning. . ."

NEW
JET LINE TABLES

The nuArc Line-up Table is an invaluable precision tool for every graphic arts plant. All moving parts are precision machined and aligned at the factory. Straight edge assembly rides accurately and effortlessly on a heavy duty rack and gear mechanism. nuArc quality means more accurate register—reduced "make-over"—better and more efficient printing.

Register and Repeat is an exclusive nuArc feature that saves you time and guarantees accuracy of duplicates and make-overs. Simply set the stops that are standard equipment (six on front bar and six on side bar) for your original press sheet, press or bindery layout sheets. If it is necessary to make more than one copy, you are sure of duplicating your originals quickly and with perfect accuracy with the pre-set stops as your guide. As an added convenience, the bars can be removed and stored indefinitely with the stops in position. Extra bars and stops are available.

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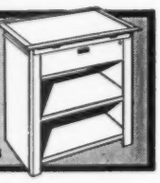
Feature: chrome plated precision straight edges on four sides; fluorescent lighting; metal construction. Shipped set-up, ready to use. Five sizes to 42 x 62. Send for Bulletin A217.



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REEVES
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West Coast Distributor: California Ink Co., Inc., 545 Sansome Street, San Francisco 11, California

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NEWS ITEMS

Du Pont Expansion Program – Construction of a three story addition to an existing building, which will provide space for product storage, shipping operations and enlarged facilities for plant technical activities, has been announced by the E. I. du Pont de Nemours and Co.'s Rochester Photo Products plant. It is the first step in an expansion and modernization project which the company expects to complete about August of next year.

Luebbe Joins Dewey and Almy—James T. Keefe, sales manager of the General Printing Products Dept., Dewey and Almy Chemical Div., W. R. Grace & Co., has announced the appointment of Thomas C. Luebbe to a newly created position as sales representative for printing products. Luebbe will work in parts of the Midwest and South, with headquarters in Cincinnati.

SAVE GET

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materials
time
labor

100% accurate counting
up to 1,500 per min.
complete tabbing freedom

with
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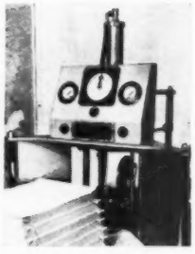
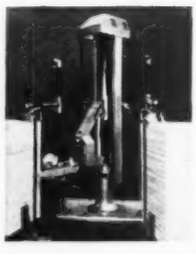
Ledger
Looseleaf
Security printing & counting
Sheet paper stock
Stamps
Writing pads



VACUUMATIC MARK II

Counts sheet sizes from 2" x 3" to 36" x 40" in stacks to 12" high at the rate of 1,500 per minute.



VACUUMATIC MARK V(B)

Designed for large production counting. Swinging head feature allows for immediate counting of second 4 ft. high stack after first is counted. Counts up to 450,000 sheets in 8 hr. shift. Handles the smallest to largest sizes of paper.

Other Vacuumatic counter models are available for more specific jobs. These also have standard mechanisms for tabbing at 100, 250 or 500 intervals. An electronic accessory provides for tabbing at any count desired from 6 to 999. Prices range from $3,000 to $8,650 depending on model.

CROSFIELD ELECTRONICS INC.
47 NEW YORK AVE.
WESTBURY, N. Y.
EDgewood 4-1940

For more information circle 44 on Reader Service Card

Lithoplate Appoints Two Representatives—Lithoplate, Inc., Sub. of Harris-Intertype Corp., has made two appointments, a technical representative and a sales representative. Charles F. Brynelsen will work in the Chicago area in a sales capacity. He has been in the Graphic Arts industry since 1948,

BRYNELSEN

PERRY

working as a dealer salesman before joining Lithoplate. William Perry will work in the Washington, D. C., area as a technical representative. Before joining Lithoplate, Perry served as chief of the Reproduction Section, U.S. Dept. of Agriculture.

Personnel Changes Made at Miller – According to an announcement by F. G. Betlock, vice president, Miller Printing Machinery Co. has recently made several personnel changes. W. W. Hicks, manager of Miller's Philadelphia branch, has retired after 33 years of service. He is succeeded by E. W. Traster, who has represented Miller on the Eastern Seaboard for seven years. R. V. Hundley, formerly manager of Miller's West Coast territories, will manage sales activities from headquarters in Washington, D. C. Sherman K. Wallin will represent Miller in its new Los Angeles branch office.

Herbert Products Appoints Two—Two appointments have been announced by W. C. Herbert, president of Herbert Products, Inc. Charles Carswell, who has done research and development work in the field of static elimination

CARSWELL

YAHNKER

and drying, was named chief engineer. William F. Yahnker, a Herbert salesman in New York and the Midwest for the last few years, was appointed sales

continued on page 12

FEEL THIS NEW CHAMPION® BOND

This is 20 lb. Champion Bond

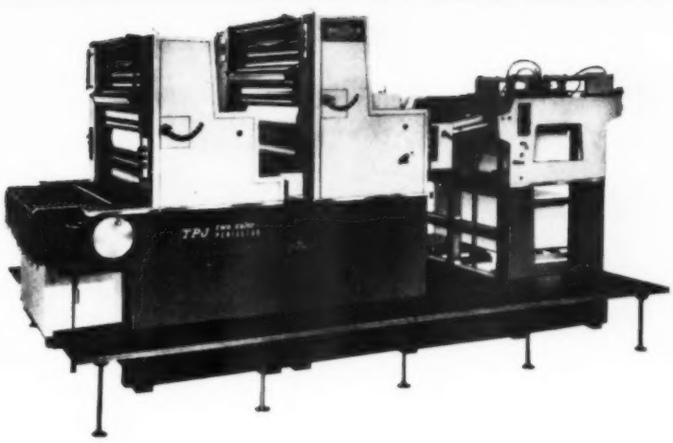
Bring "two-color press" profits to *both* kinds of two-impression printing!

Here is one kind of two-impression printing, two colors on one side of a sheet. Two-color presses generally offer definite advantages in speed and economy of production for this type of work.

But this is another kind of two-impression printing, one color on both sides of a sheet. You can now bring "two-color press" advantages to this type of work.

How? By installing "the world's most versatile printing machine," the Miller TPJ 23x36 Two Color-Perfector Offset Press. / It's a two-color press, unexcelled in its ability to produce the finest multicolor or process work at speeds up to 7000 per hour. / It's a perfecting press, printing the same or different colors on both sides of a sheet at speeds up to 6000 per hour . . . and the print quality rivals single-color press production! / Investigate how Miller TPJ versatility, speed, and quality can bring greater profits to *all* your "two-impression" work. Write today for brochure.

CHANGEOVER TIME: 15-20 MINUTES



miller

MILLER PRINTING MACHINERY CO., 1103 REEDSDALE ST., PITTSBURGH 33, PA. • IN CANADA: SEARS LIMITED, 253 SPADINA ROAD, TORONTO 4

For More Information Circle 130 on Reader Service Card

News Items

(CONTINUED FROM PAGE 8)

manager with responsibility for sales and company dealer coordination.

Carnegie Visiting Professor Appointed—Dr. J. C. Warner, president of Carnegie Institute of Technology, has announced the appointment of Martin Krampen as visiting assistant professor in the Depts. of Graphic Arts and Psychology. The appointment, made across departmental lines, is a step in Carnegie Tech's new interdisciplinary plan of education.

Paul Joins Chicago *Tribune*—Appointment of Fred Paul as mechanical superintendent of the Chicago *Tribune* has been announced by L. M. Gossett, production manager. Paul has been a mechanical engineer for the newspaper since 1959. Prior to joining the *Tribune*, he was associated with the Goss Company, Div. of Miehle-Goss-Dexter, Inc., where he had been assistant field superintendent for 10 years.

Ideal Roller Takes Over Dickson Co.—E. B. Davis, vice president of Ideal Roller and Manufacturing Co. announced that Ideal has acquired the Harry Dickson Co. of San Francisco. Harry Dickson has been made the Pacific Coast sales manager for Ideal. R. H. Neale, manager of the Pacific

HARDY

R. DICKSON

plant, announced that the San Francisco office will be moved to larger quarters in Burlingame, Calif., where Don Hardy will be in charge, assisted by Richard Dickson. Ideal's fifth factory recently opened in Marlboro, Mass.

Goss Transfers Riggs to Sales—The Goss Company, Div. of Miehle-Goss-Dexter, Inc., has announced the transfer of Andy Riggs from field service to the sales division. Riggs, who will assist sales representative Herb Hanson, will cover territories in Colorado, Illinois, Iowa, Kansas, Missouri, Nebraska and Wyoming.

RIGGS

ARMENT

Arment to Represent Photon—Kurtz M. Hanson, president of Photon, Incorporated, has announced the appointment of Robert A. Arment to Midwestern representative. Arment will represent Photon in the field of photographic typesetting and equipment application in the Graphic Arts industry.

Di-Noc Announces Honeoye Plant Management—Di-Noc Chemical Arts, Inc. has announced management appointments for its Photo Products Div.'s new plant in Honeoye, N. Y. F. T. Sweet was elected general manager of the Photo Products Div. and executive vice president of the Corporation; his headquarters will be in Honeoye. Edwin A. Sweet, Jr., will be in charge of public relations and special assignments. Robert R. Cramer was named assistant general manager

a complete line of supplies and equipment for your composing room

You can print a better looking newspaper faster . . . *and with more economy* . . . with efficient, reliable, production-tested supplies and equipment in your composing room.

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For rapid service and consistent economy in newspaper printing supplies and equipment . . . order from EASTERN. Write for Catalog No. 25.

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96-03 NORTHERN BLVD., CORONA 68, NEW YORK

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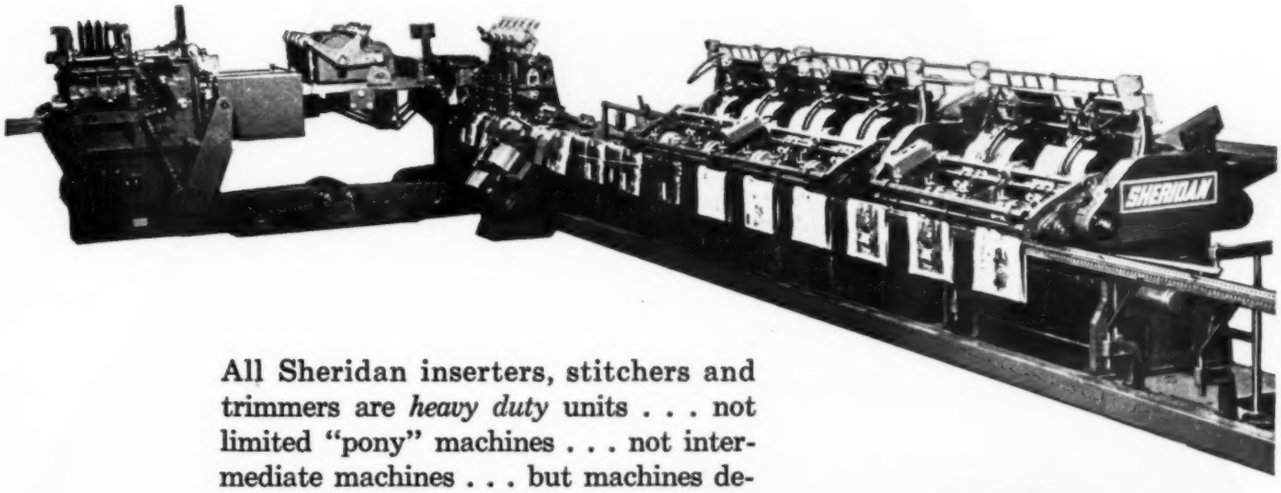
AUTOMATIC SADDLE BINDING?

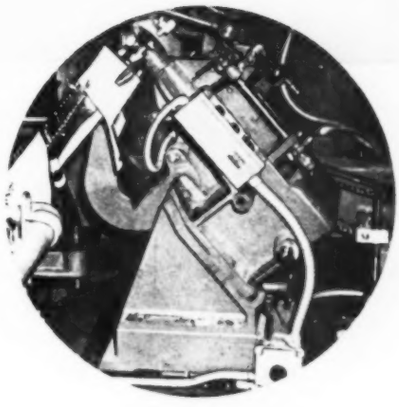
Sheridan builds to achieve high hourly production... not to meet a price!



All Sheridan inserters, stitchers and trimmers are *heavy duty* units . . . not limited "pony" machines . . . not intermediate machines . . . but machines designed and built to deliver consistently high hourly production.

This extra value may mean a slightly higher *initial* investment . . . **BUT** Sheridan equipment *consistently* returns higher profits through a substantially lower cost per thousand books.

Heavy duty construction of all units, with the weight in the *right* places, plus dynamic balancing of rotating parts, eliminates vibration and deflection, the major causes of equipment malfunction. These extra construction values also mean minimum maintenance and longer machine life.



Only Sheridan offers the positive action Sheridan master book caliper for unfailing detection of over or under sized books . . . another extra value feature.

SINCE 1835

SHERIDAN

T. W. & C. B. SHERIDAN COMPANY
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PRODUCT OF 125 YEARS OF EXPERIENCE 1835-1960

For More Information Circle 183 on Reader Service Card

of the new plant. John M. Lupo, Jr., will be the sales manager and H. C. Ward will be internal sales administrator. Also appointed for the new plant were G. L. Korff, manager; J. H. Ferris, office manager; R. J. Null, purchasing, routing and scheduling, and J. E. Diamond, advertising.

Stoltzner Becomes Goss Parts Service Manager—Carl Stoltzner has been appointed manager of parts and service of the Goss Company, Div. of Miehle-Goss-Dexter, Inc. Stoltzner, who has been with M-G-D for 40 years, replaces the late Walter Wielgos.

STOLTZNER

PETERSON

Peterson Joins Photon—John L. Peterson has joined Photon, Incorporated, as an applications engineer and field representative in the sales division, Kurtz M. Hanson, president, announced. Peterson, who is a former Intertype Company salesman, will represent Photon in the field of photographic typesetting.

Hantscho Elevates Three, Expands Plant – George Hantscho, president of George Hantscho Co., has announced the appointments of Werner Schlegle as chief engineer, Edward P. Woroniecki as production manager and Walter Hantscho as assistant to the president. The company also has completed an expansion program to provide increased manufacturing area for its web offset business. In 1959 Hantscho licensed the Miehle Company to manufacture and sell six standard sizes of Hantscho web offset presses.

SCHLEGLE WORONIECKI HANTSCHO

Canadian Linotype Changes Quarters—Canadian Linotype, Ltd., will move to larger quarters with access to high speed highways. The new quarters at 829 Oxford St., Toronto 18, Ont., will soon be further expanded to include a display of Graphic Arts equipment. The company is Canada's exclusive distributor for Linotype, Mergenthaler, L&M and Davidson presses and supplies, and Linofilm.

Howard Paper Moves Eastern Office—Howard Paper Mills, Div. of St. Regis Paper Co., has moved its Eastern sales office from the Empire State Building to 633 3rd Ave., New York 17.

Chicago Firm Sold to Haynes Litho—The Inland-Magill Weinsheimer Corp., Chicago printers since 1913, has been

Only Prime Mats

Bear the BEVERIDGE BRAND

All Beveridge mats are manufactured under strictest quality control—to assure users prime quality.

FOR THE NEWSPAPER FIELD

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A high quality mat for general work, capable of multiple casting—highly compressible, easy to mold, fast drying.

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A Favorite for Automatic Equipment—highly compressible, easy to mold, fast drying.

FOR THE SYNDICATE FIELD

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Red and white contrast makes it the market's most readable mat—best available for hot baked work—crisp, flawless reproductions—unlimited casts, flat or curved—low pressure molding—dimensional stability for R. O. P. color work.

BEVERIDGE "500" SYNDICATE

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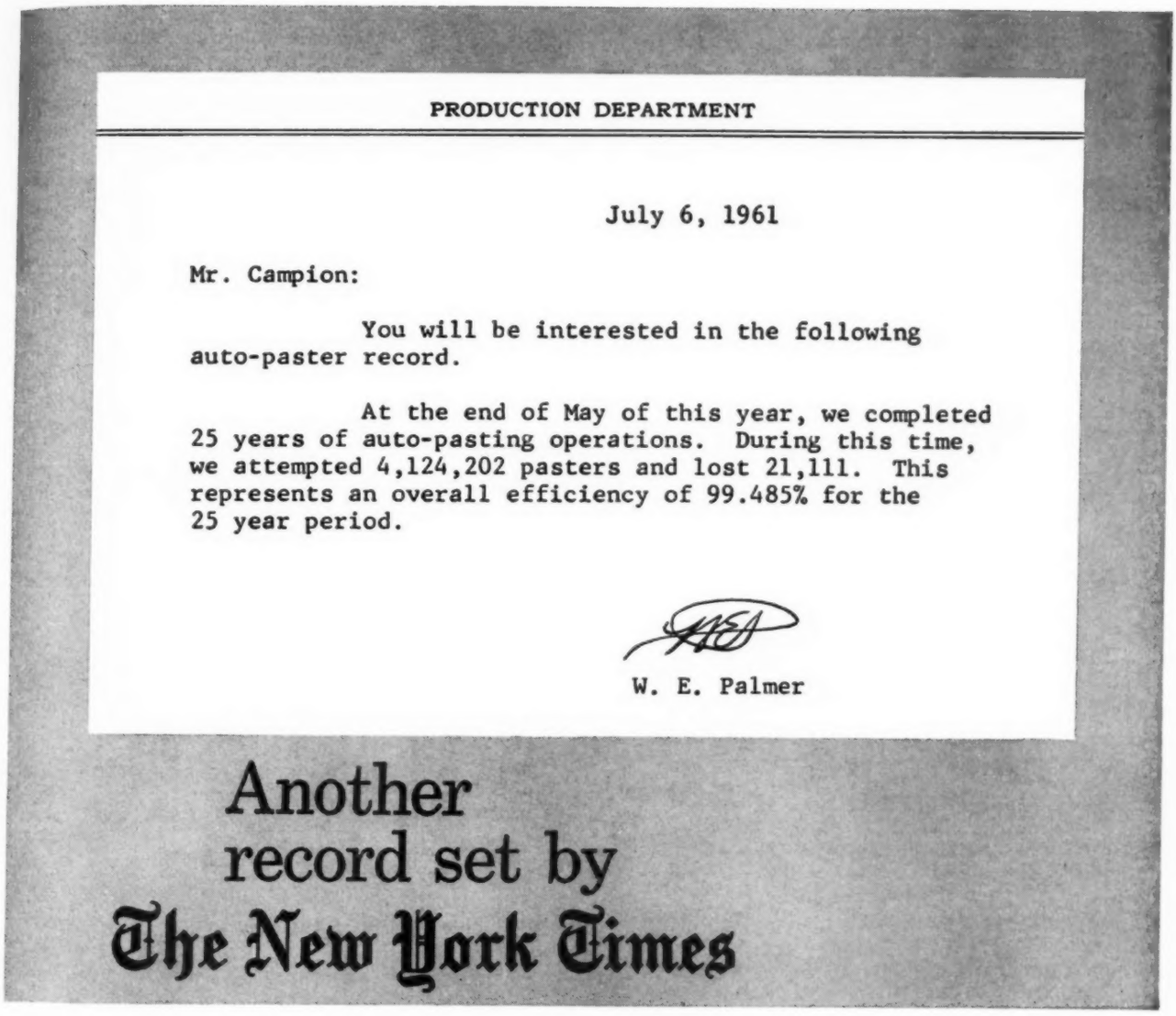
PRODUCTION DEPARTMENT
July 6, 1961
Mr. Campion:
You will be interested in the following auto-paster record.
At the end of May of this year, we completed 25 years of auto-pasting operations. During this time, we attempted 4,124,202 pasters and lost 21,111. This represents an overall efficiency of 99.485% for the 25 year period.
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Another record set by
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WOOD is justly proud of the outstanding performance of its reelroom equipment and pays a well-deserved tribute to the efficiency and skill of The New York Times operating staff in setting and maintaining a record of 99.485% successful flying pasters over a quarter-century of continuous operation.

Similar equipments are installed in leading newspaper plants throughout the world and *all* are providing the same exceptional service. If you are interested in reelroom equipments that increase press production, look to WOOD for the answer—send for descriptive literature.

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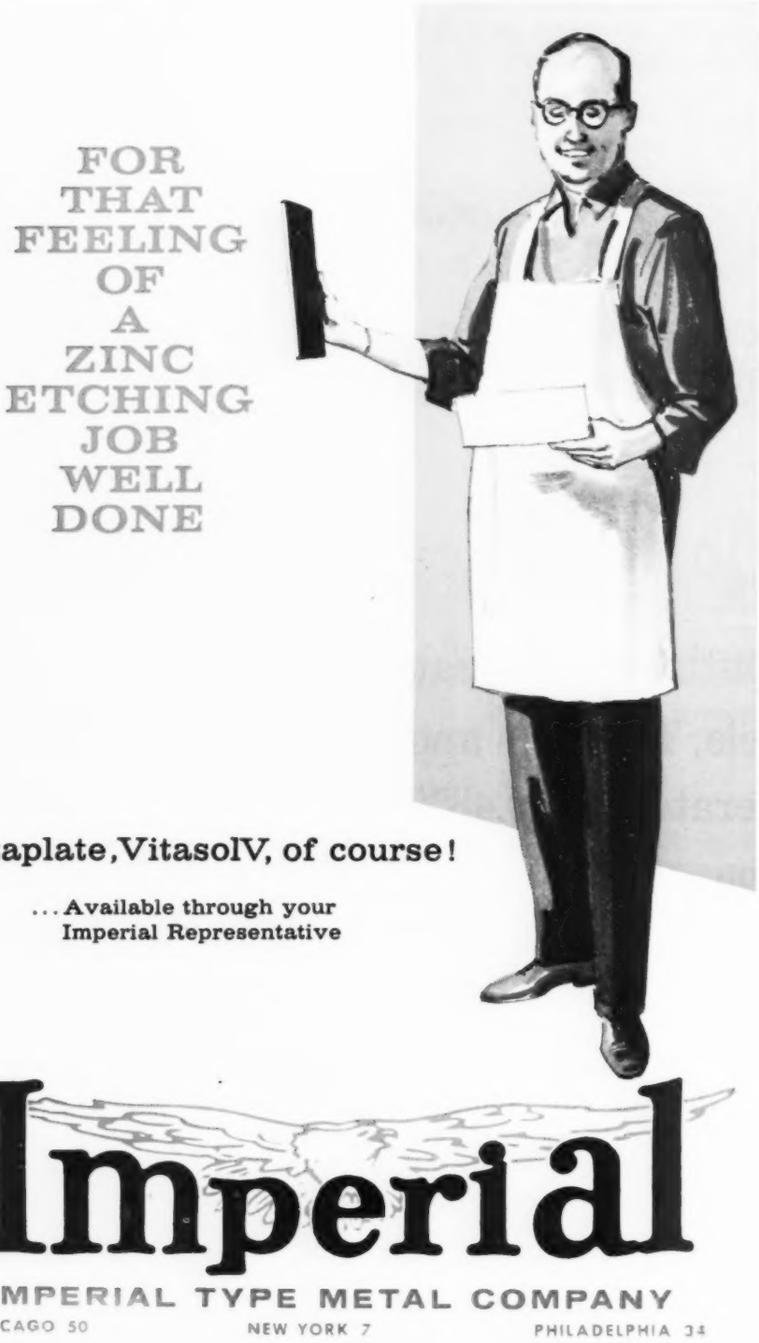
sold to Haynes Lithograph Co., Rockville, Md. Specializing in commercial and publication lithography, Haynes has planned for some time to expand into the Chicago area.

Art Gravure Names Co-Managers – Thomas P. LeBosquet, president of Art Gravure Corp., New York, has announced the appointments of Francis X. Graham and Ronald D. Parslow to co-managers of plant operations. They will replace Martin J. Waters who resigned. Graham has served as plant superintendent for Art Gravure for the past 15 years. Parslow, who joined Art Gravure in 1923, has served as retouch foreman.

GRAHAM

PARSLOW



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Archer Joins Rochester Staff—H. Brent Archer has joined the School of Printing of Rochester Institute of Technology as visiting lecturer in photolithography. Archer is a former printing instructor at Sam Houston State College in Huntsville, Texas. He replaces Harold O. Pattillo who is on leave of absence from the Rochester school.

Graphic Arts Executive Dies – Louis Janof, prominent Washington, D. C., Graphic Arts executive died recently from a heart ailment at Johns Hopkins Hospital in Baltimore. Mr. Janof was a vice president and director of Kauffman Printing Co., and had retired earlier this year from the vice presidency of Lanman Engraving Co. He was president of Advertisers Engraving Service until 1953 when the company was bought by the Washington *Post*.

Named to Vulcan Sales Posts—Joseph Hamm and Jack Rearden have been promoted to the posts of assistant sales

HAMM

REARDEN

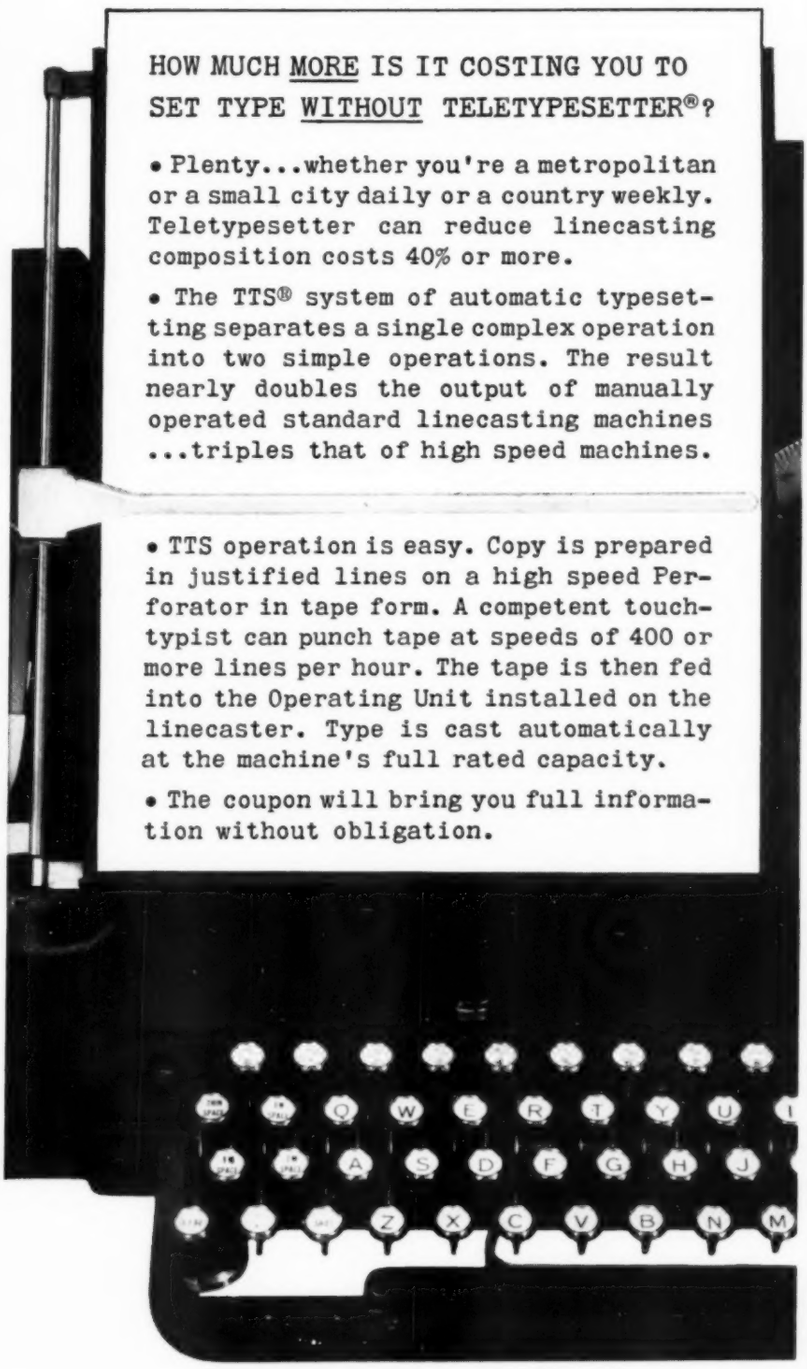
manager for Vulcan lithographic offset press blankets manufactured by Vulcan Division, Reeves Brothers, Inc.

Jomac Acquires National Roller Co. – Jomac Incorporated, Philadelphia, has purchased the stocks and assets of National Roller Co., New York City. H. Howard Colehower, president of Jomac, announced that National Roller will be operated as a separate company with H. Howard Colehower III as interim manager.

Providence Gravure Names Manager—Martin J. Waters has become production manager for newly formed Providence Gravure, Inc., Providence, R. I., John C. A. Watkins, president, announced. Waters has been vice president and plant manager of Art Gravure Corp. in New York for the last 10 years.

Financial Printers Move Headquarters—Browne & Co., specialists in financial printing, recently moved to Standard & Poor's Bldg. in New York City, Edmund A. Stanley, Jr., president, has an-

continued on page 101



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You punch tape right in your plant, but in addition, wire service news and market reports can be reperforated and fed directly into your linecasting machines.

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MEETINGS for the PRINTING INDUSTRY

American Photoengravers Assn.—1962 Conv., Hotel Statler, Washington D. C., Oct. 15-17. Exec. Secy. Frank J. Schreiber, 166 W. Van Buren St., Chicago 4.

ANPA-RI Production Management Conf.—1962 Conf., Sheraton Hotel, Philadelphia, June 11-14. Mgr. William D. Rinehart, ANPA-RI Mechanical and Service Div., 750 Third Ave., New York 17.

Book Manufacturers' Institute — Secy. Miss A. G. Watson, 25 W. 43rd St., New York 36.

Fifth District Craftsmen's Conf.—1962 Conf., Claypool Hotel, Indianapolis, May 11-12. Pres. Elim H. Smith, Gospel Trumpet Co., Anderson, Ind.

Flexographic Technical Assn. — 1962 Meeting, Pick-Congress Hotel, Chicago, May 7-8. Exec. Secy. Julian Ross, 220 W. 42nd St., New York 36.

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Graphic Arts Assn. Executives—Secy-Treas. Doris Hall, 321 Tower Bldg., Washington 5, D. C.

Gravure Technical Assn.—1962 Conv., Hotel Commodore, New York, Feb. 26-Mar. 1. Exec. Secy. Edward S. St. John, Room 5060, 30 Rockefeller Plaza, New York 20.

Great Lakes Newspaper Mechanical Conf.—1962 Conf., Claypool Hotel. Indianapolis, Jan. 14-16. Secy. John E. Innis, R. R. No. 1, Box 546, Indianapolis 27, Ind.

Illinois Newspaper Mechanical Conf.—Secy.-Treas. Arthur Kramer, Joliet (Ill.) *Herald-News*.

Intl. Assn. of Electrotypers & Stereotypers, Inc.—1962 Conv., Mark Hopkins Hotel, San Francisco, Oct. 1-4. Exec. Secy. Floyd C. Larson, 758 Leader Bldg., Cleveland 14.

Intl. Assn. of Printing House Craftsmen—1962 Conv., Pittsburgh Hilton Hotel, Pittsburgh, Aug. 12-15. Exec. Secy. Pearl E. Oldt, 411 Oak St., Cincinnati 19, Ohio.

Intl. Graphics Arts Education Assn.—1962 Conf., Western Washington College of Education, Bellingham, Wash., July 29-Aug. 3. Exec. Secy. Samuel M. Burt, 1411 K St., N.W., Washington 5, D. C.

Intl. Printers Supply Salesmen's Guild—1962 Conv., Pittsburgh Hilton Hotel, Pittsburgh, Aug. 11-12. Secy. Harrie Lewis, 853 Broadway, New York 3.

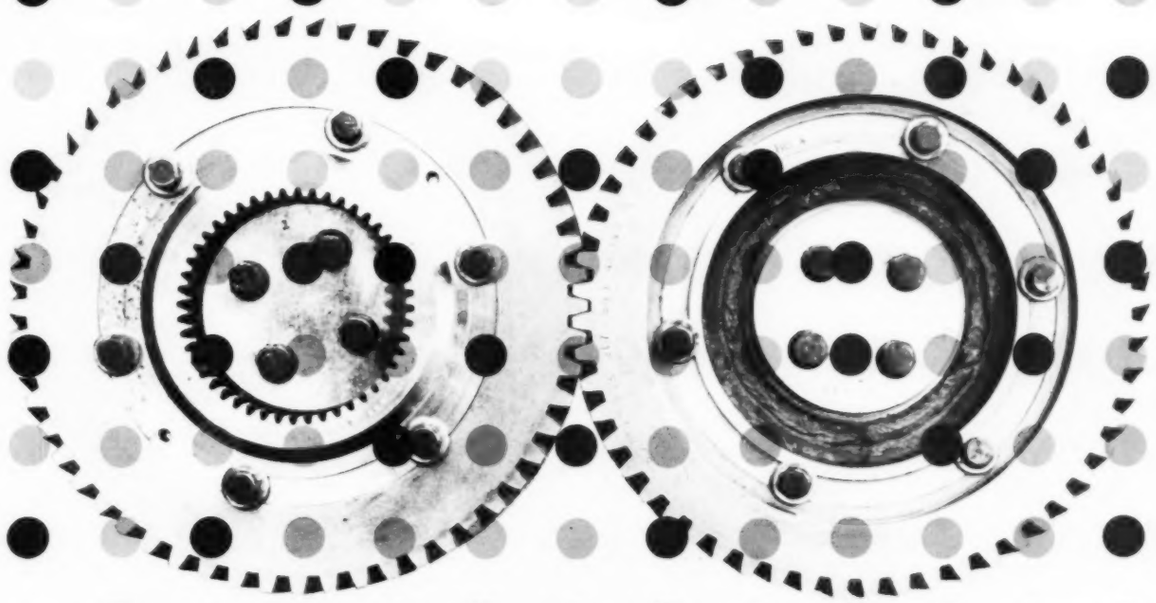
Intl. Typographic Composition Assn.—1962 Conv., Brown Palace Hotel, Denver, Aug. 15-19. Exec. Secy. McKinley M. Luther, Washington Bldg., 15th St. and New York Ave., N.W., Washington 5, D. C.

Lithographers and Printers National Assn.—1962 Conv., Boca Raton Hotel and Club, Boca Raton, Fla., May 7-10. Dir. Oscar Whitehouse, 1025 Connecticut Ave., N.W., Washington 6, D. C.

Lithographic Technical Foundation — 1962 Annual Members Meeting, Sheraton-Blackstone Hotel, Chicago, Mar. 20. Exec. Dir. William H. Webber, 131 E. 39th St., New York 16.

Mid-America Newspaper Mechanical Conf.—1962 Conf., Hotel Muehlebach, Kansas City, Mo., Sept. 7-9. Secy. Cliff Waters, Kansas City (Mo.) *Star*.

Mid Atlantic Newspaper Mechanical Conf.—1962 ANPA-Mid-Atlantic Production Management Conf., Sheraton Hotel, Philadelphia, June 10-13.



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Mgr. G. Richard Dew, 2717 N. Front St., Harrisburg, Pa.

National Assn. of Litho Clubs – 1962 Conv., Deauville Hotel, Miami Beach, May 31-June 2. Mgr. Robert Mayer, 330 S. Wells St., Chicago 6.

National Assn. of Photo-Lithographers –1962 Conv., Hotel Ambassador, Los Angeles, Sept. 19-22. Exec. Vice Pres. William J. Stevens, Herald Tribune Bldg., 230 W. 41st St., New York 36.

National Paper Trade Assn. – 1962 Conf., Waldorf-Astoria, New York City, April 15-18. Exec. Secy. O. Glenn Leach, 220 E. 42nd St., New York 17.

National Printing Equipment Assn., Inc.–1962 Meeting, Queen Elizabeth Hotel, Montreal, Can., Oct. 3-4. Exec. Secy. William G. O'Donnell, Room 914, 509 Madison Ave., New York 22.

National Safety Council Printing and Publishing Section – Staff Rep. E. E. Koch, National Safety Council, 425 N. Michigan Ave., Chicago 11.

New England Daily Newspaper Composing Room Executives Assn. – 1962 Conf., Hartford, Conn., May (Hotel and exact date to be announced). Exec. Secy. Lewis R. Greene, Westerly (R.I.) *Sun.*

New England Newspaper Mechanical Conf.–Secy.-Treas. Walter C. Crighton, New London (Conn.) *Day.*

Northwest Newspaper Mechanical Conf.–Secy. Treas. Ralph N. Carson, Dunwoody Industrial Institute, 818 Wayzata Blvd., Minneapolis 3, Minn.

Pacific Newspaper Mechanical Conf. – 1962 Conf., Biltmore Hotel, Los Angeles, Sept. 14-16. Secy. Edward J. Maggi, Phillips & Van Orden Co., Fourth & Berry Sts., San Francisco.

Packaging Institute Assn.–Exec. Dir. Chas. A. Feld, 342 Madison Ave., New York 17.

Printing Industry of America – 1962 Conv., Queen Elizabeth Hotel, Montreal, Can., Oct. 1-6. Gen. Mgr. Bernard Taymans, 5728 Connecticut Ave., N. W., Washington 15, D. C.

Research and Engineering Council – 1962 Conf., Hotel Park-Sheraton, Washington, D. C., June 4-6. Managing Dir. Robert E. Rossell, 1411 K St., N. W., Washington 5, D. C.

Rocky Mountain Newspaper Mechanical Conf.–1962 Conf., Brown Palace Hotel, Denver, Col., October. Pres. Gil Bailey, Scottsbluff (Neb.) *Star-Herald.*

Screen Process Printing Assn., Intl. – 1962 Conv., Hotel Sherman, Chicago, Oct. 19-21. Exec. Secy. Robert H. Blundred, 549 W. Randolph St., Chicago 6.

SNPA (Eastern Div.) Mechanical Conf. –1962 Conf., Francis Marion Hotel, Charleston, S.C., Aug. 5-7. Secy. James B. Brotbeck, P. O. Box 1569, Chattanooga 1, Tenn.

SNPA (Western Div.) Mechanical Conf. – 1962 Conf., Oklahoma City, Mar. 4-6. Secy. Claude V. Capers, P. O. Box 1569, Chattanooga 1, Tenn.

Southern Graphic Arts Assn. – 1962 Conf., Buena Vista Beach Hotel and Motel, Biloxi, Miss., May 6-9. Secy. Charles E. Kennedy, P. O. Box 1187, Nashville 2, Tenn.

Technical Assn. of the Graphic Arts– 1962 Conv., Hotel Radisson, Minneapolis, June 11-13. Exec. Secy. Earl Sundeen, P. O. Box 3064, Federal Station, Rochester 4, N. Y.

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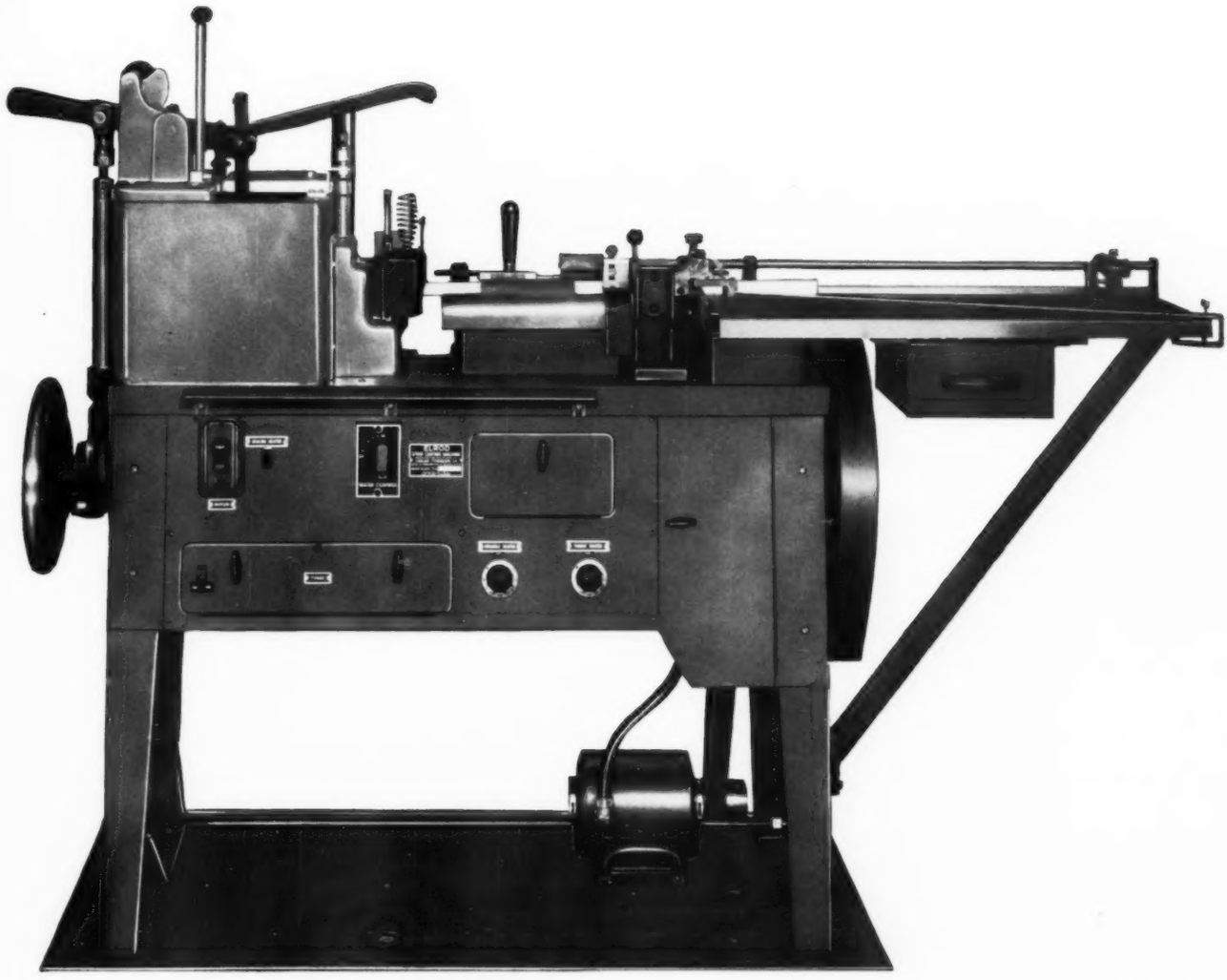
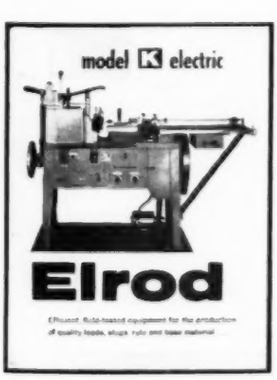


model K Elrod



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when you CHOOSE THE RIGHT PAPER FOR THE JOB!

Maintaining the purity of delicate flesh tones against a background of almost solid red, requires painstaking plate making, knowledgeable printing, and a printer familiar with the tools of his trade. Paper is one of these tools.

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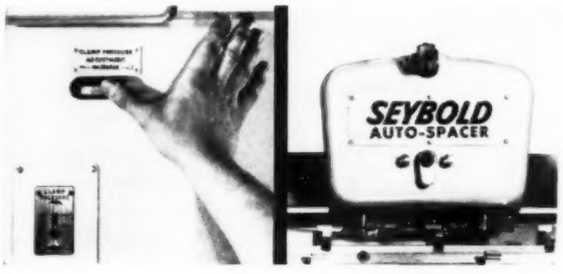
NEW SIZE SABER-WISE 65"

There's a new member on the famous team of Seybold Saber II power paper cutters—the big new Seybold Saber 65"! Like its famous teammates—the 41", 47" and 54"—the Saber 65" has all the outstanding features you expect from Control Zone Design. Unique inline cutting action; 100% square backgauge; scientifically correct 53° shear angle; "cushion contact" clamping; patented Auto-Spacer; and many more precision features that add up to complete cutting control. You'll find operational advantages like these in every vital Control Zone on your Seybold Saber II cutter. The result of Harris-Intertype's continuous research and engineering development programs. Dedicated to helping you profit through controls.



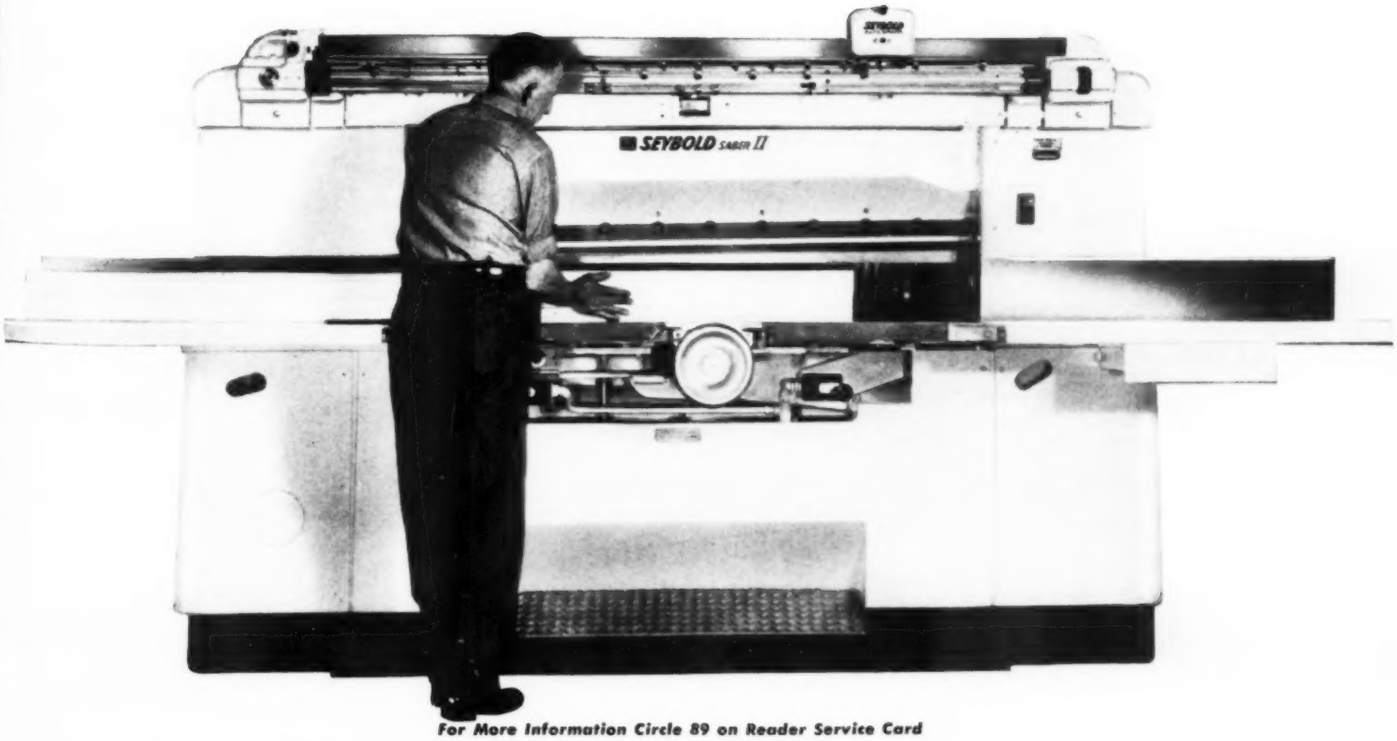
CONTROL ZONE DESIGN

POSITIONING CONTROL ZONE — Seybold "Auto-Spacer" memorizes the cutting sequence, moves backgauge into correct position for each cut, automatically indexes to next job strip or repeats previous cutting sequence. CLAMPING CONTROL ZONE — Thumb wheel at front of cutter quickly regulates all-important clamp pressure from weight of the clamp up to 6 tons. Handles all types of stocks. CUTTING CONTROL ZONE — Inline cutting action eliminates knife chatter and bowed cuts. Knife is *drawn* through the pile; cuts are straight, square, uniform.

HARRIS INTERTYPE CORPORATION

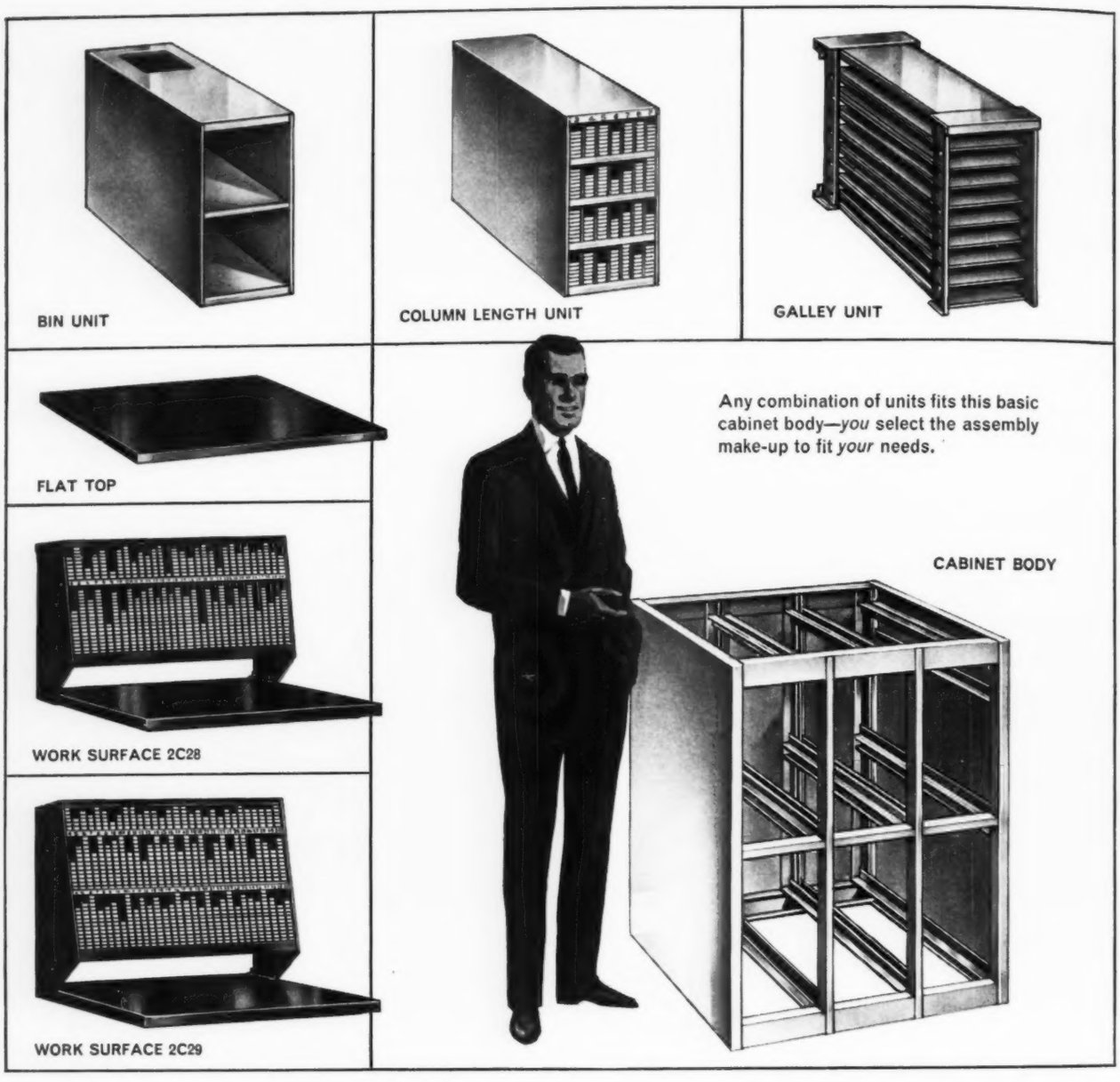
HARRIS-SEYBOLD DIVISION

4510 E. 71ST STREET, CLEVELAND 5, OHIO



For More Information Circle 89 on Reader Service Card

← *For more information circle 110 on Reader Service Card*


BIN UNIT
COLUMN LENGTH UNIT
GALLEY UNIT
FLAT TOP
Any combination of units fits this basic cabinet body—*you* select the assembly make-up to fit *your* needs.
CABINET BODY
WORK SURFACE 2C28
WORK SURFACE 2C29

Space-saving ad frames – *to your own design*

These new Hamilton Space-Maker ad frames actually *take ⅓ less space* while providing greater storage capacity! They reduce crowding, step up production. Pick the units that fit your work, your composing room. Hamilton builds ad assembly cabinets to fit your particular needs . . . yet you pay no more for this custom assembly. *Write today* for Catalog AP-326 and free Custom Design Kit.

Unit No. 41C11 Unit No. 41C16

Hamilton

PROFESSIONAL AND SCIENTIFIC FURNITURE

Hamilton Manufacturing Company, Two Rivers, Wisconsin

New Dimensions in Time and Space Efficiency for: physicians; dentists; industrial, hospital, school laboratories; draftsmen; printers; libraries; home laundries.

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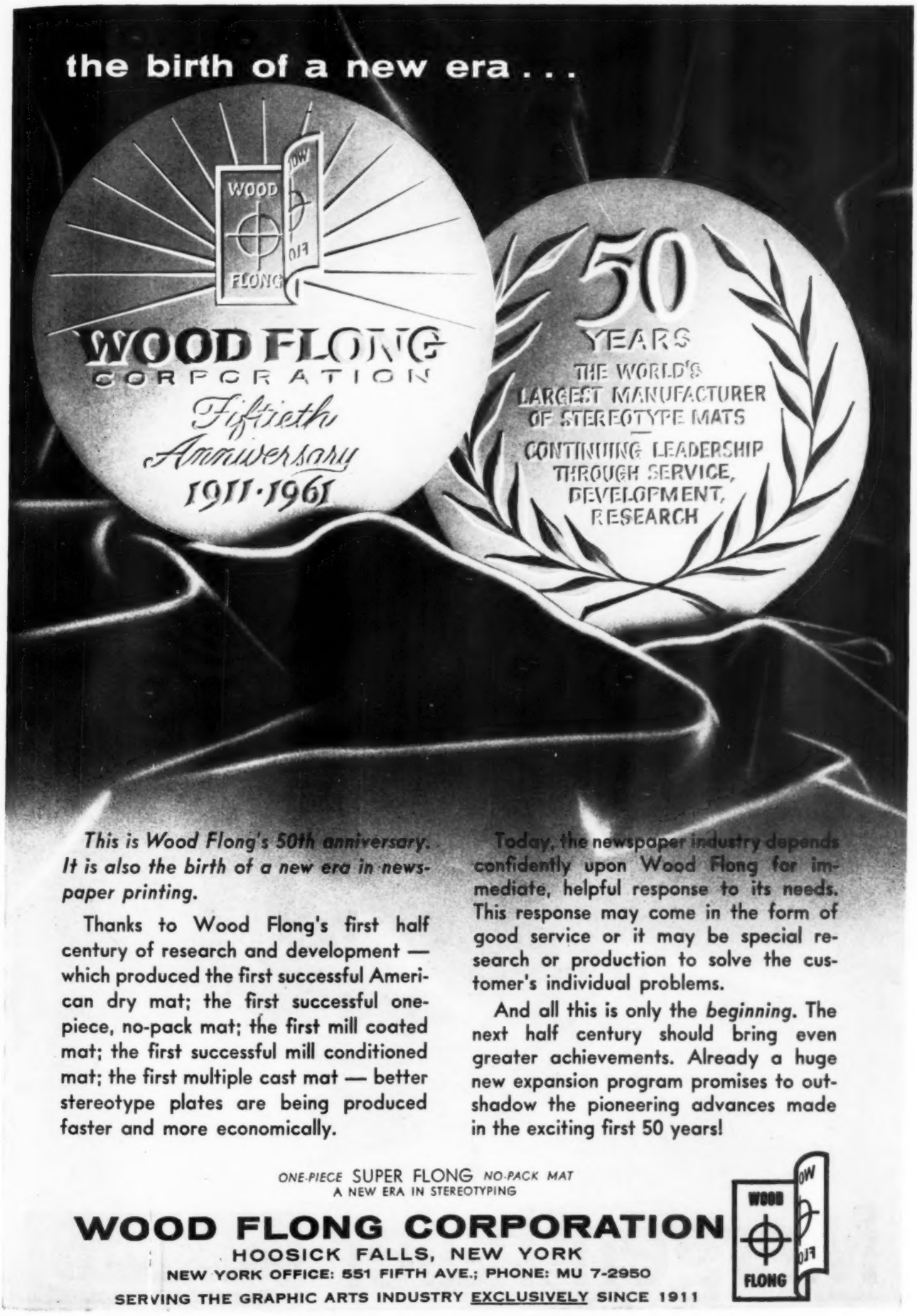


This is Wood Flong's 50th anniversary. It is also the birth of a new era in newspaper printing.

Thanks to Wood Flong's first half century of research and development — which produced the first successful American dry mat; the first successful one-piece, no-pack mat; the first mill coated mat; the first successful mill conditioned mat; the first multiple cast mat — better stereotype plates are being produced faster and more economically.

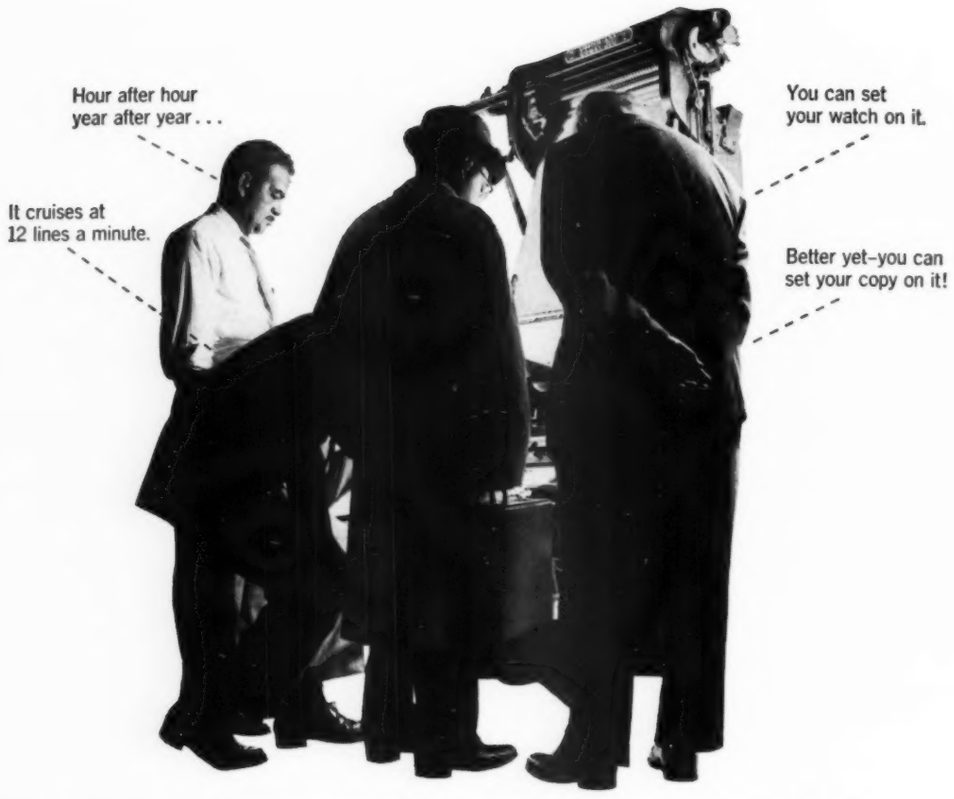
Today, the newspaper industry depends confidently upon Wood Flong for immediate, helpful response to its needs. This response may come in the form of good service or it may be special research or production to solve the customer's individual problems.

And all this is only the *beginning*. The next half century should bring even greater achievements. Already a huge new expansion program promises to outshadow the pioneering advances made in the exciting first 50 years!

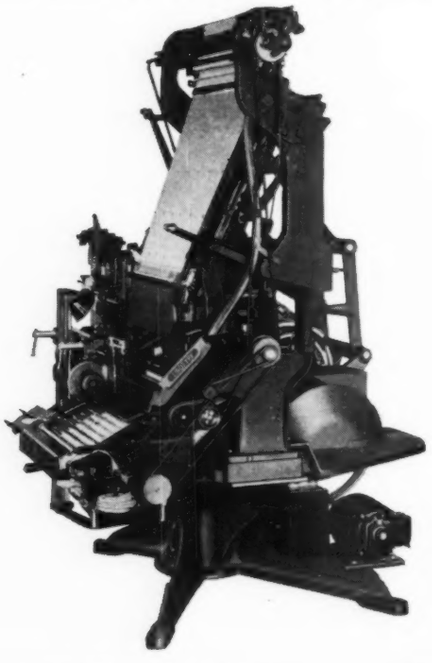
ONE-PIECE SUPER FLONG *NO-PACK MAT*
A NEW ERA IN STEREOTYPING

WOOD FLONG CORPORATION
HOOSICK FALLS, NEW YORK
NEW YORK OFFICE: 551 FIFTH AVE.; PHONE: MU 7-2950
SERVING THE GRAPHIC ARTS INDUSTRY EXCLUSIVELY SINCE 1911

For More Information Circle 217 on Reader Service Card



THE LINOTYPE COMET 300 gives you 12 lines of perfect type every 60 seconds. You get built-in dependability . . . year after grueling year. That's why the Comet 300 outsells any other linecasting machine: it's the Proven Producer. We believe the Comet 300 is the finest Linotype ever built for dependable high-speed production. Why not let your Linotype Production Engineer tell you the full story? Mergenthaler Linotype Company, 29 Ryerson Street, Brooklyn 5, New York.

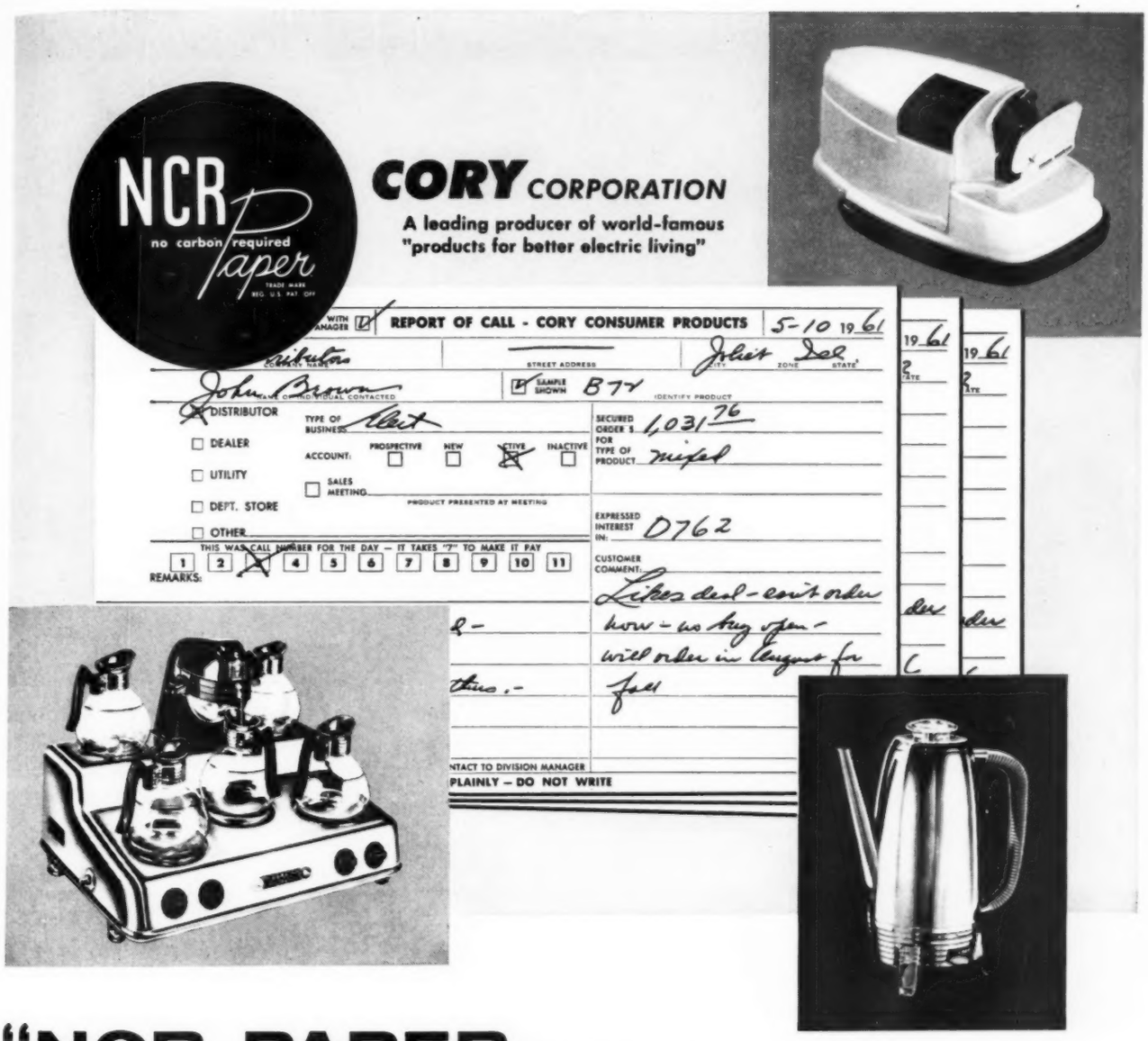


Mergenthaler · LINOTYPE ·

For More Information Circle 125 on Reader Service Card

RATTLE THIS NEW CHAMPION® BOND

This is 20 lb. Champion Bond



"NCR PAPER saves us its entire yearly cost...every nine months."

—CORY CORPORATION, CHICAGO, ILL.

"NCR Paper (No Carbon Required) is a valued 'business friend' for us. We've used it for years for many reports and forms.

"New NCR Paper three-part Report of Call forms enable our territory managers to give concise, fast, daily sales reports to their sales managers. In addition, NCR Paper memo forms make it easy for traveling Cory executives to write 'Quick Action' memos to home office and field personnel.

"Our NCR Paper forms always provide clean, clear, easy-to-read copies. Originals and copies are picked up as complete units. Insertion, removal and disposal of carbon paper are eliminated. This simplifies procedures and speeds important communications.

"Our experience with NCR Paper shows it saves time and effort every time we use it. Its many advantages are so outstanding that we estimate NCR Paper easily saves us its entire yearly cost, every nine months."

J. W. Alsdorf,
President, Cory Corporation

ASK YOUR LOCAL PRINTER OR FORMS SUPPLIER ABOUT NCR PAPER

Another Money-Saving Product of

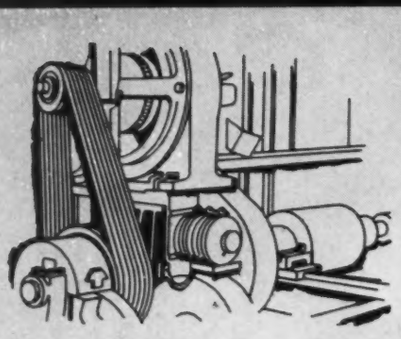
THE NATIONAL CASH REGISTER COMPANY, Dayton 9, Ohio

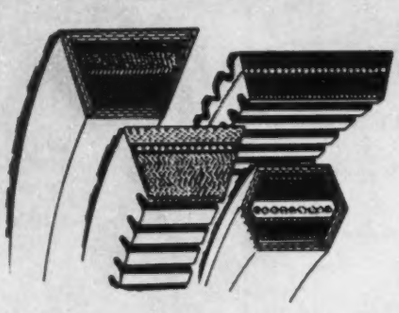
1039 OFFICES IN 121 COUNTRIES • 77 YEARS OF HELPING BUSINESS SAVE MONEY

NCR PAPER ELIMINATES CARBON PAPER

For More Information Circle 142 on Reader Service Card

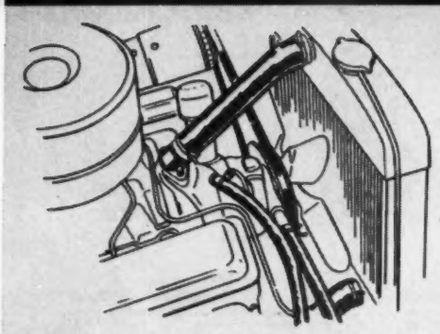
V-BELT DRIVES

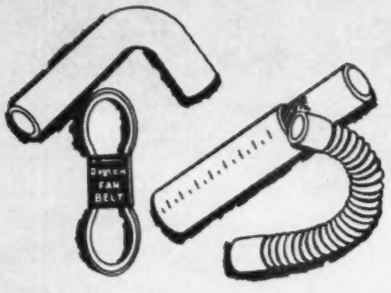




Dayco offers the only complete line of V-Belts in the industry for every power transmission need—from fractional to 1,000 and more horsepower.

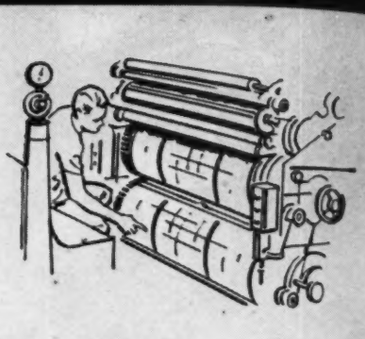
AUTOMOTIVE PRODUCTS

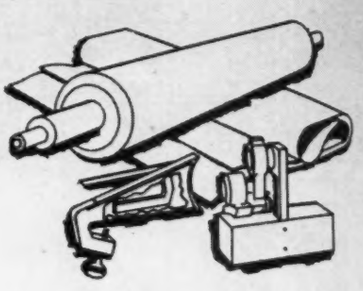




Dayco provides a complete line of Fan Belts, Radiator Hose, and other rubber products for passenger cars, trucks, busses, and tractors.

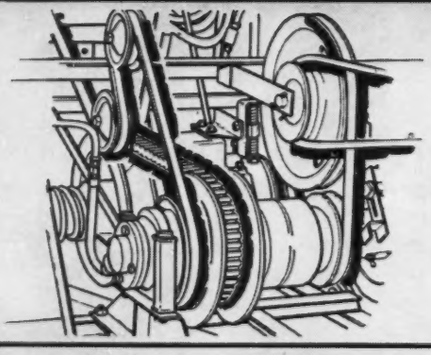
PRINTING PRODUCTS

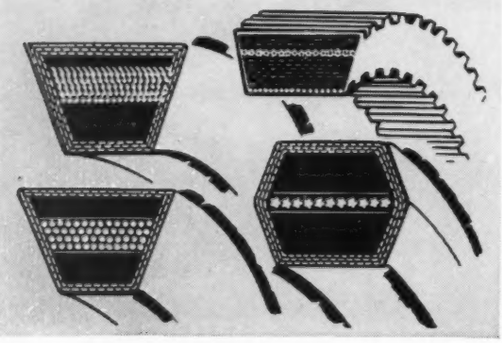




Dayco offset and letter press rollers, Gold Seal offset Blankets, Color Separators and Fountain Dividers, for all makes of presses.

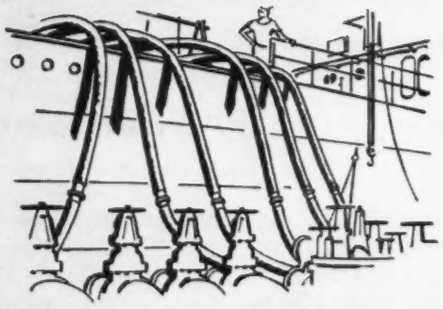
AGRICULTURAL V-BELTS

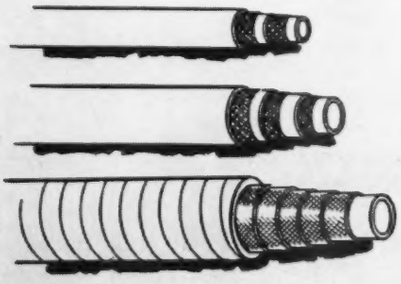




Dayco builds specialized V-Belts for the efficient transmission of power on all types of traction, propulsion and auxiliary farm implement drives.

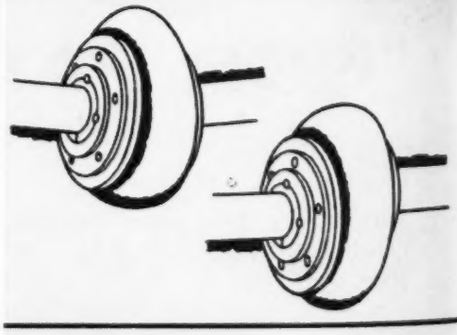
INDUSTRIAL HOSE

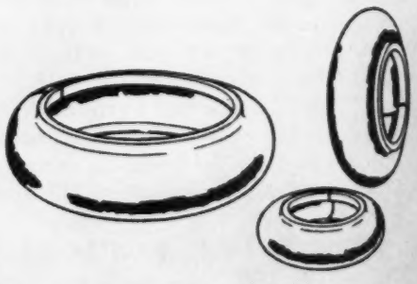




Dayco offers molded and horizontal braided, machine and hand wrapped fabric, and woven jacket constructions for all industrial applications.

MOLDED RUBBER





Dayco custom-engineered molded rubber, rubber-to-metal and rubber-and-fabric components for mechanical applications.

Dayton

Take your pencil. Get all the Day**ton** literature from your files. Make one little change. In place of Day**ton** write Day**co.**

From now on, that's our product name. **Dayco** V-Belts. **Dayco** Hose. **Dayco** Printing Rollers and Blankets. **Dayco** Molded Rubber. **Dayco** Agricultural and Railway Drives.

Thus ends the difference between our corporate name, Day**co** and our **former** product name, Day**ton.**

Let us repeat. The only thing that's changed is the name. The same high quality. The same broad line. The same friendly, helpful people. Only their product line is now **Dayco. DAYCO. D-A-Y-C-O.**

Dayco CORPORATION

Printing Products Division — Melrose Park, Illinois

(Formerly known as The Dayton Rubber Company)

For More Information Circle 46 on Reader Service Card

HELPFUL LITERATURE

FOLDERS · Sales Aids · Instruction Sheets · BULLETINS · Catalogs · BOOKLETS · Brochures

Circle Numbers on Reader Service Card in This Issue *Keep Yourself Informed.* The folders and bulletins listed below all pertain to modern equipment, supplies, processes and/or methods. These have been prepared especially for plant managers, superintendents and foremen. Please circle the numbers on the Reader Service Card in this issue for the bulletins you wish to receive. Drop the self-addressed card in the mail. PRINTING PRODUCTION will forward your request.

Composing Room

ATF TYPE FOLDER OFFERED

American Type Founders Co. is offering a four page folder illustrating various design uses of ATF's Craw Clarendon Condensed type face. The folder designed by Freeman Craw, who created the Craw family of type faces, shows ways he would employ the type. Specimens of the entire range of point sizes are also presented. CIRCLE No. 324 ON READER SERVICE CARD.

SAW BLADE SAFETY TOOL

New circular safety tool information is given in an illustrated booklet from the Brett-Guard Corp. A transparent Plexiglas unit that covers the saw blade, yet allows full vision and accuracy in difficult saw cuts, is featured in the booklet. The safety tool device fits all metal cutting saws. CIRCLE No. 316 ON READER SERVICE CARD.

ATF TYPESETTER PAMPHLET

American Type Founders Co. is offering a brochure in which is described the components of the ATF Typesetter, including the keyboard unit, photographic unit, and type disc. The Retnec System, a reverse centering composing technique, is also explained. CIRCLE No. 320 ON READER SERVICE CARD.

TELETYPESETTER MAT DETECTOR

A Fairchild Teletypesetter mat detector is described in an illustrated brochure published by Fairchild Graphic Equipment, Div. of Fairchild Camera and Instrument Corp. The folder contains an explanation of the detector, which automatically stops a TTS-equipped linecasting machine if a matrix fails to drop. It also has a description of how the device will eliminate errors caused by bent or damaged matrices and faulty magazine escapements, keyboards and keyboard cams. CIRCLE No. 322 ON READER SERVICE CARD.

Platemaking

GRAPHIC ARTS HANDBOOK

A 60 page *Graphic Arts Handbook* offered by Ansco, Div. of General Aniline & Film Corp., contains the story behind the materials Ansco uses and how these materials may be used to best advantage. The different sections of the book include information on Graphic Arts evolution, the physical properties of film, film processing and Ansco graphic chemicals. CIRCLE No. 325 ON READER SERVICE CARD.

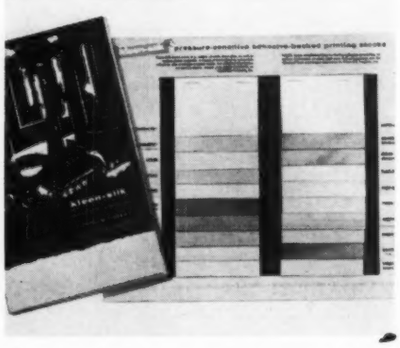
PRINTING LAMPS BROCHURE

An illustrated brochure on 95 amp. high intensity arc printing lamps, including those for overhead use with Unilight attachment, and for Lanston Photocomposing equipment is available from Strong Electric Corp. CIRCLE No. 323 ON READER SERVICE CARD.

Pressroom

GUIDE TO TEXT PAPERS

Text Papers, A Guide To Their Ordering, Handling and Use is the title of a new booklet available from American Writing Paper Corp. Purpose of the booklet is to help all text paper users and specifiers get better acquainted with this grade of paper by describing its characteristics and advantages and indicating how it can be used more effectively. The booklet also serves as a guide to standard sizes and weights, and to make specifications more accurate and efficient. CIRCLE No. 319 ON READER SERVICE CARD.



Kleen-Stik Products, Inc.'s swatch book contains 20 samples of its adhesive backed printing stocks. *Circle No. 317 on Reader Service Card.*

CHIEF 15 OFFSET PRESS

American Type Founders announces the availability of a 12 page booklet describing the Chief 15 offset press. The colorful booklet includes descriptions of 30 features of the 11 in. by 15 in. press. Close up photos show details of the features. CIRCLE No. 314 ON READER SERVICE CARD.

1961 NEWSPAPER COLORS

The 1961 edition of *Newspaper Colors and Toners,* a display of Sinclair & Carroll Co. Inc.'s ANPA-AAAA approved standard colors, is available to newspapers, advertisers and advertising agencies. Although the new edition duplicates exactly those colors originally selected by the ANPA-AAAA Ink Committee in 1955, advertisers and advertising agencies are advised to use the 1961 edition since color deterioration may have occurred in the former editions. CIRCLE No. 326 ON READER SERVICE CARD.

COLOR KING OFFSET PRESS

The Color King web offset perfecting press is described in a 12 page brochure issued by Fairchild Graphic Equipment, Div. of Fairchild Camera and Instrument Corp. The four color illustrated booklet has operating information and descriptions of the Color King's features. Production capabilities and general specifications are listed together with a diagram of the press. CIRCLE No. 315 ON READER SERVICE CARD.

BULLETINS ON LINEUP TABLES

The Hulen Line-Up Table Co. has literature available concerning several of its products. The Precision Punch, for all types of litho, engraving, gravure, engineering and allied use, is illustrated and described in one release; another deals with tilting top lineup tables. A pamphlet contains a description of Hulen's complete set of hand tools, normally supplied with lineup

continued on page 101

For more information circle 121 on Reader Service Card →

LAWSON DOES IT AGAIN!!

LAWSON PACEMAKER II

42" 47" 52" 56"

New Quality Cutters... Priced to Meet All Competition, Anywhere

Lawson does it again with a new line of high production, extremely accurate "American" cutters. Lawson engineered, Canadian-built...with all gearing, hydraulics and electrics U.S.-made. And the price is right.

Lawson's Pacemaker II is a completely new kind of cutter...new engineering—new fully enclosed design—new features never before available anywhere—new operating advantages. New sizes for a changing industry—42″, 47″, 52″ and 56″. New Lawson automatic spacing efficiency, too.

50 stroke-a-minute knife speed is nearly 20% faster than most comparable cutters now available.

Dual-Drive knife action uses two synchronized drives with powerful conical multi-mesh gearing to pull knife bar from both ends. Eliminates excess linkage—oversize pull bars pull knife directly in line with shear slot. Smooth...no chatter—no rattling of ordinary gears.

3-point knife bar support with bearing surfaces at center and both ends—positively prevents bowing—assures straight cuts all the way across the lift for life of cutter.

Double non-repeat protection is provided by a heavy steel locking latch forced into place at the beginning of each cycle and by automatic double safety switch to assure electric clutch disengagement—the knife cannot repeat.

Cushioned hydraulic clamping does not jar or disturb the alignment of lift. Clamping pressure easily adjusted to meet all individual job requirements.

6½″ clamp opening provides greater capacity—means extra production per man/hour, tons more accurately cut paper per day.

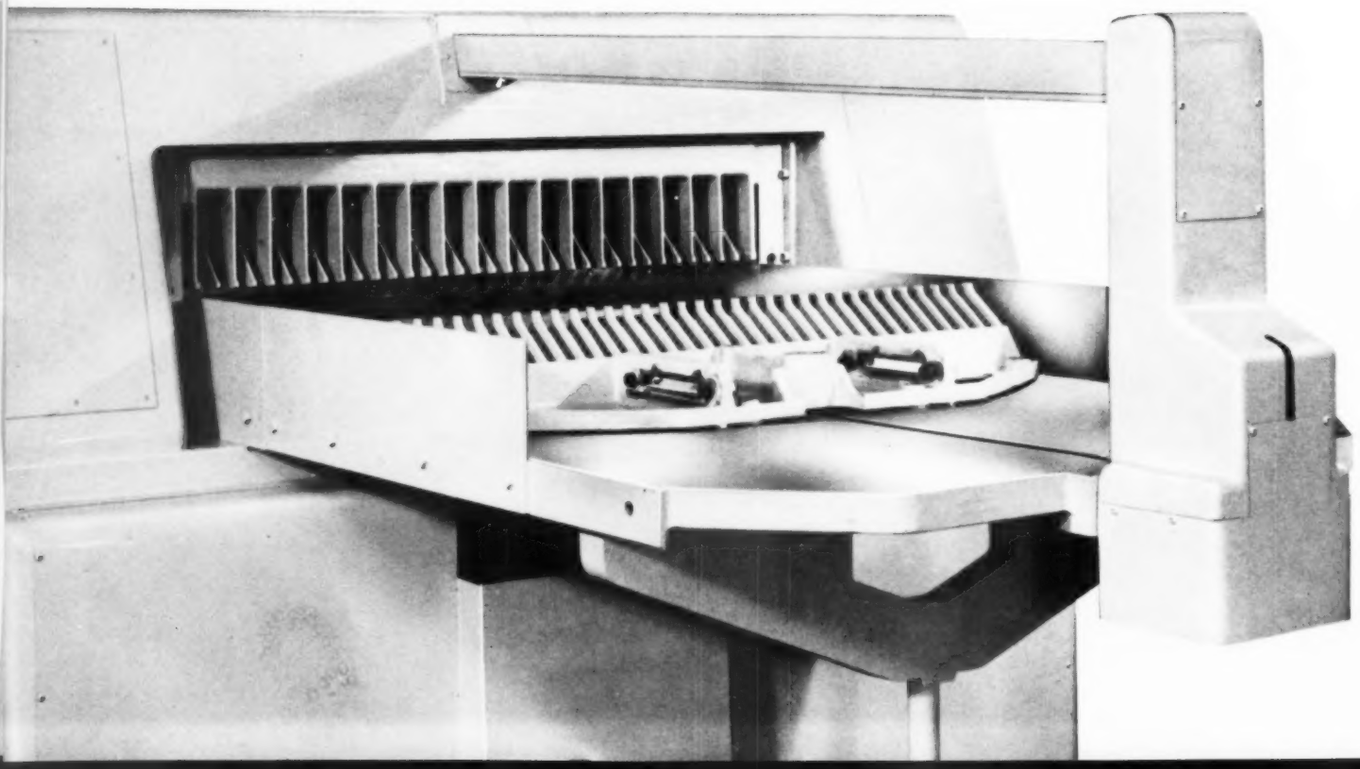
Heavy, massive clamp of box-type construction is extra-strong and more rigid. Pull from clamp line, with full-height guides, assures perfect alignment. Gibs assure squareness for life of machine.

Hydraulic tank cast into base is oversize, puncture proof, won't leak. Pump is inside the base. Hydraulic cylinder enclosed in tank.

Optically projected scale is magnified on giant screen on front of cutter at eye level—shows back gauge depth in 64ths.

LAWSON PACEMAKER II

A PRODUCT OF NORTH AMERICAN MANUFACTURE



Positive pressure interlock prevents knife from moving until clamp has removed air from lift and holds firmly at pre-set pressure. The lift cannot shift while cutting.

Overloads on both pull bars stop machine instantly in case of undue strain from a dull knife, a foreign object, or improper settings.

Simplified electrics, with clearly marked plug-in type control relays make routine service easy. All components standard U.S. manufacture.

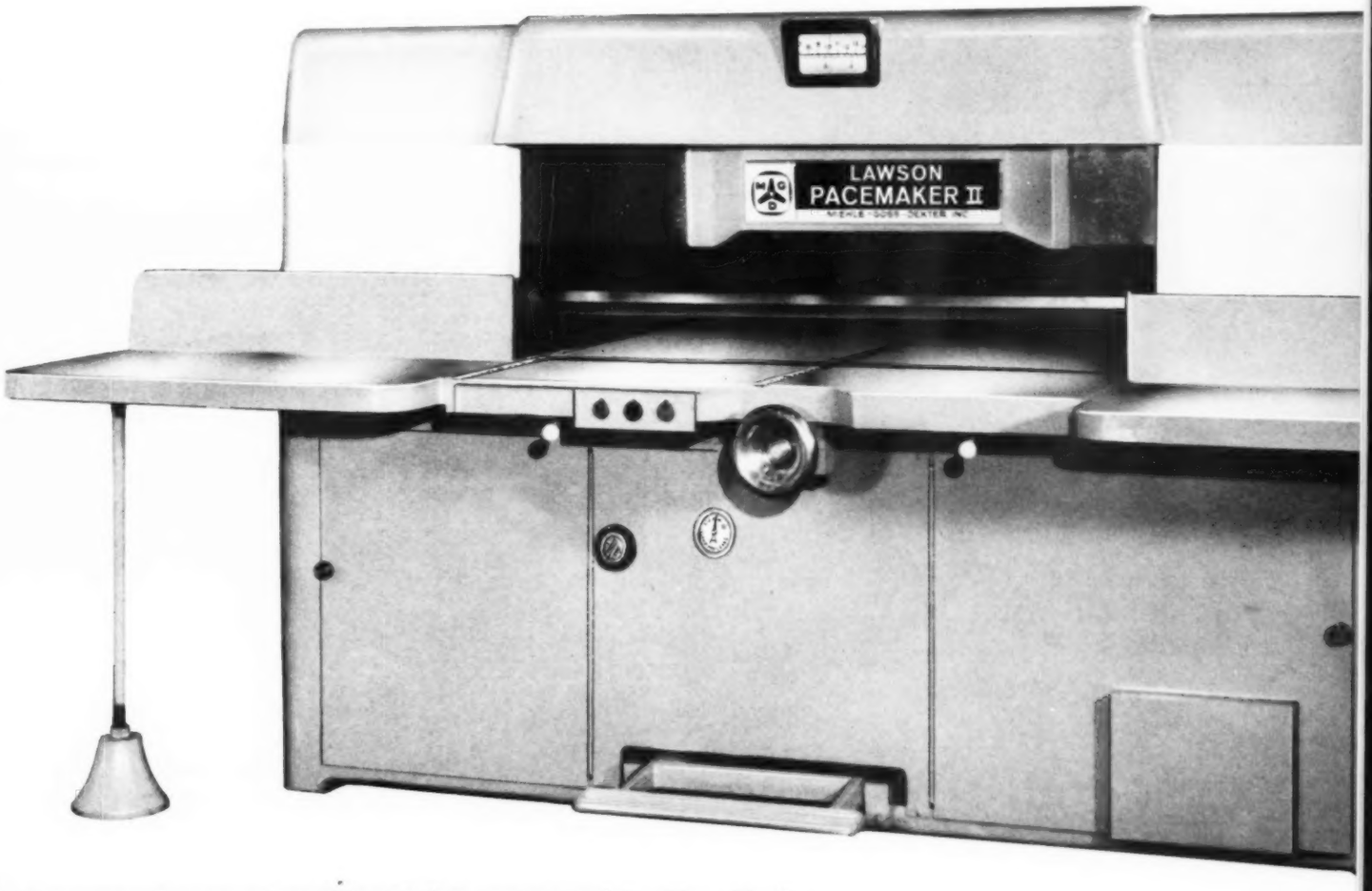
Heavyweight construction with rugged castings for added strength and rigidity. Designed and built for heavy-duty production requirements.

Fully enclosed design with all operating parts—motor, flywheel, hydraulic unit—mounted inside massive cast frame. Fully protected, yet readily accessible.

Long-life, anti-friction bearings at all connections are fully protected from dust and dirt.

Optional automatic spacing with unmatched precision accuracy—increases production while eliminating the chance of operator error due to fatigue or carelessness—Choice of two Lawson models—Electronic or Autoset tape.

Flexible Contour Clamp actually flexes to conform to irregularities in contour of lift—holds paper firmly all across the pile. An exclusive optional feature.



Only Lawson Pacemaker II offers so many advantages plus:—rear table slot closing device...full contact disc-type brake...gears operate in sealed bath of oil...all controls on front of machine...clamp leveling device...tiltable three-piece fingered back gauge ...safe easy-to-use knife changing device...pop-up cutting stick ejector...rugged crossribbed table...two precision scales in table...extra-large front tables...optional air-cushion device...pre-wired at factory.

Safety approved by New York Labor Board and C.S.A.

Simplified maintenance and long life are assured by the basic design and extra features such as—swing-out front doors—cast-in oil and lubrication run-off tray—off-center back gauge screw—appliance-like supercoat paint finish.

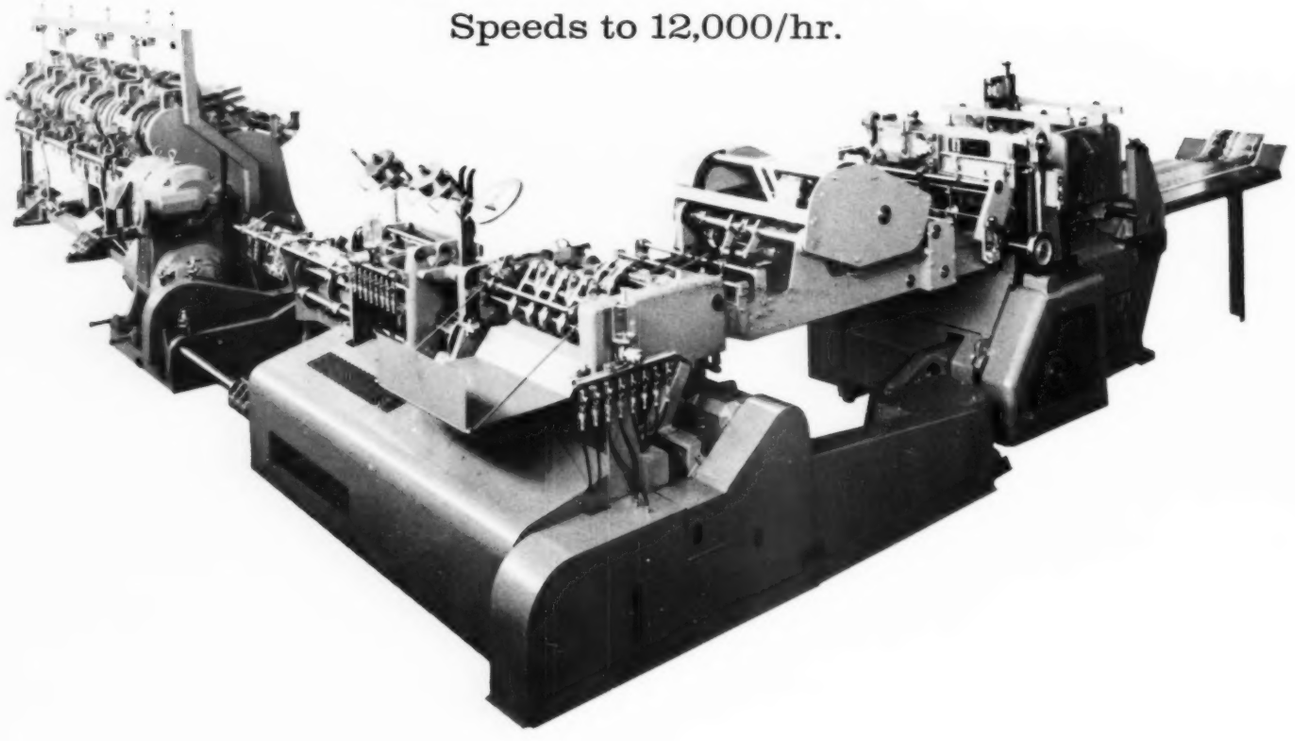
Backed by MGD—every Lawson Pacemaker II is backed by Miehle-Goss-Dexter, world's largest manufacturer of graphic arts machinery.

The low price of this truly "American" cutter will amaze you. See the new Pacemaker II in your area soon—find out how much value Lawson offers for the money. And see the standard Pacemaker line for 60, 66 and 69″ sizes.

THE LAWSON COMPANY
Division of Miehle-Goss-Dexter, Inc.
Chicago 8, Illinois

All New McCain UNITIZED Automatic Saddle Binder

Trim sizes to 15¾" or 18¾"
Speeds to 12,000/hr.



The McCain UNITIZED Saddle Binder is specifically designed for long run publications with tight deadlines. It's profit potential is based on a completely new principle of automatic saddle binding.

Automatic signature feeders of the McCain UNITIZED are *individually* driven and timed to match variable chain spacing, permitting *each size publication to be handled at its own optimum production speed.*

An ultra-sensitive McCain heavy duty caliper and a McCain high speed stitcher were especially developed for the new McCain UNITIZED Saddle Binder. A popular McCain 3-knife trimmer with two-book collecting drum completes the in-line machine. Depending on the job, speeds to 12,000/hr are possible.

The McCain UNITIZED is not recommended where short runs of many sizes are most important. For such work Dexter offers the all-McCain E-20 at speeds to 10,000/hr; the McCain-Christensen combination to 8,000/hr; and the McCain Saddle-Matic at 4,500/hr.

McCAIN BINDERY EQUIPMENT
Sold and Serviced by
THE DEXTER COMPANY
Division of Miehle-Goss-Dexter, Inc.
Chicago 8, Illinois

PRINTING PRODUCTION

Central Plants are Changing the Weekly Newspaper

MANY people concerned with the weekly newspaper field look with alarm on the appearance of the central printing plant—a centrally located production facility which performs the printing for a number of publishers. Their arguments are that what the printing industry does not need is fewer printing plants, less production employment and a decrease in equipment buying.

We see it as an inevitable change which must occur in the weekly field if newspapers are to stay in business and survive this period of rising costs. We also see it as a definite means for raising quality standards, something badly needed in this area of printing.

Last year PRINTING PRODUCTION revealed the results of a survey of weekly newspapers which concluded that the possibilities of a reduction in the number of printing plants is very real. It also showed there will be an increasing amount of centralized web offset printing of several weeklies in one printing plant to accommodate several publishers. This appears to be the big change judging from the installation reports released by the equipment manufacturers.

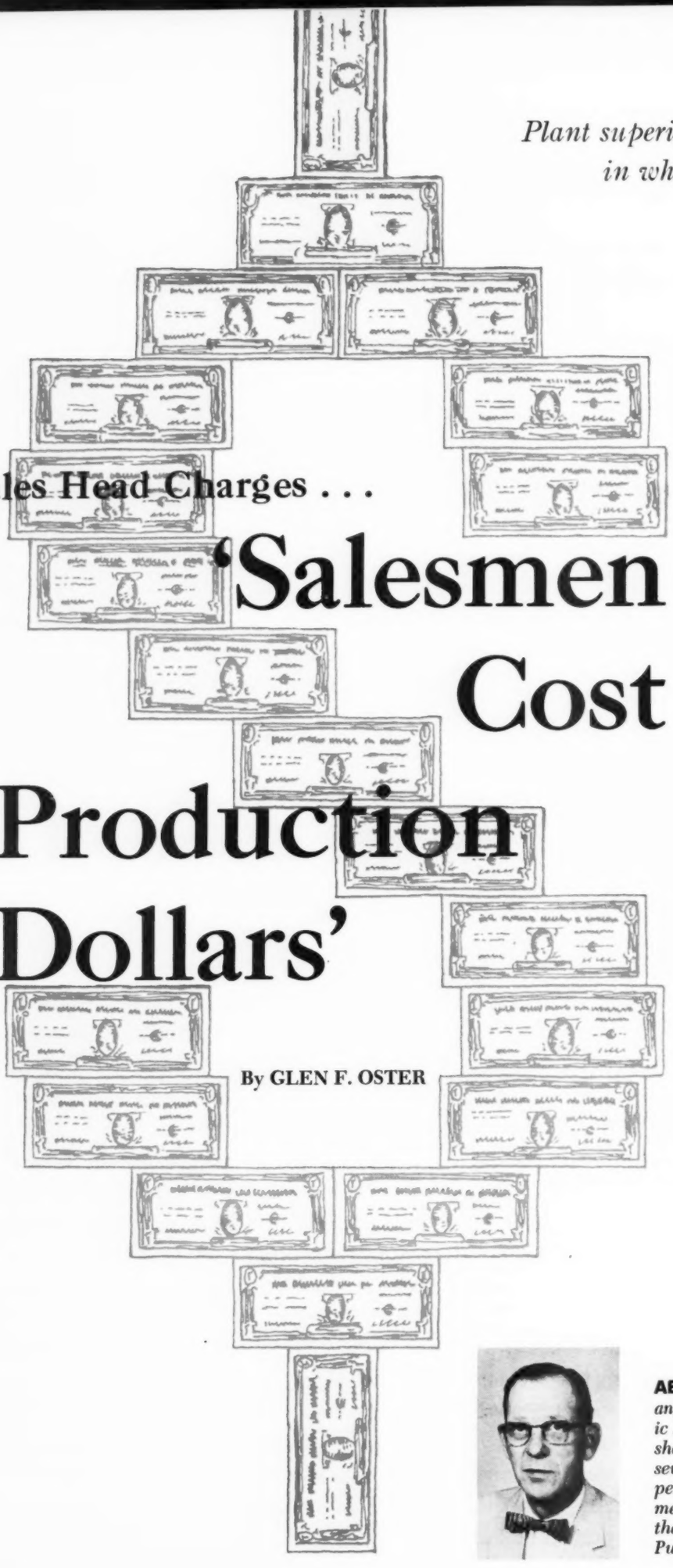
It is also interesting to note the views of one publisher, Tom Andrews, Jr., New Bethlehem (Pa.) *Leader-Vindicator*, who offers variations of the central plant idea. He thinks the central facility might include only a pressroom, or just a composing department, or both.

As mentioned, quality of production has been and still is a major problem in the weekly field. Andrews says that with two, three or more publishers producing as one unit it is very possible to acquire the most modern equipment with which to operate. Many times this is financially impossible under the separate small plant set-up.

Another factor to be considered, this publisher said, is that of utilizing other processes. Conversion to processes other than letterpress would be more feasible with the increased financial potential that would come as the result of pooled resources.

We find little argument in the statement that weekly newspapers are in need of production refurbishment. Some are already following this advice—through the route of the central printing plant.

Plant superintendents relate instances in which the salesmen's actions dim the profit picture



Sales Head Charges . . .

'Salesmen Cost Production Dollars'

By GLEN F. OSTER

THE printing salesman is supposed to be a man of many talents. He should know typography, be familiar with all aspects of both letterpress and offset printing, have a knowledge of various paper stocks and be familiar with most of the machinery in the plant and know what it will do. He also needs to be thoroughly versed in the principles of selling, customer relations and possess a creative imagination.

Deficiencies in any of these important categories can cost the salesman's firm dollars—valuable production dollars that in many cases determine the difference between a profit or loss. Regardless of sales volume, a printing salesman has a more direct relationship to the profits of his firm than any other salesman in the Graphic Arts industry.

Interviews with plant superintendents in Northeast Texas recently revealed some interesting examples of profit losses charged directly to the salesman. Each case discussed here is an actual example as told by the plant superintendent. Most of these men had suggestions to show where profits could be improved by more cooperation from the sales department, and especially from the individual salesman.

In some instances the superin-

ABOUT THE AUTHOR: *A native Ohioan, Glen F. Oster began his varied Graphic Arts career at a country weekly and job shop. He has been a correspondent for several Ohio dailies and has sold newspaper advertising as well as printing equipment and supplies. Oster currently heads the sales department of Boyd Printing and Publishing Co., Dallas.*

tendents pointed out that top management and the sales manager were unaware of wasted production time caused by the salesman representing his plant. In other instances the sales manager and top management assumed that the increased costs were the fault of the production department, or were estimating errors. In these cases no system was used to check on the individual salesman in an effort to improve the profit picture.

Salesmen can kill profits in other ways, too, by being just plain lazy. A good example of this is when the salesman brings in poorly prepared copy for a repeat order on such jobs as a membership roster. The customer crossed out deleted lines and had written corrections in the margins of the old book. The typesetter tries to follow copy to the letter, mispelled names and all. The proofreader does her best to straighten out the job, necessitating several proof revisions.

Composition Costs Rise

By the time this job gets a final OK, composition costs alone are from 10% to 15% above normal—all because of poorly prepared copy. It would have taken very little extra time on the part of the customer or the salesman to have handled the job properly. All that was necessary was to take two books, tear them apart and paste each page on a sheet of paper large enough to mark the additions and changes for easy reading by the typesetter.

Of course this takes time, and many salesmen feel that they are not paid for this extra effort. Often this attitude can be traced directly to management which does not insist on carefully prepared copy. Good copy is definitely the responsibility of the salesman and his customer. Production men agree.

At one plant the superintendent had an experience which brought the importance of layout and copy preparation into sharp focus. Forms for a two color, illustrated price list had to be remade and reregistered because the salesman failed to make a layout. He left the imposition of pages up to the discretion of the plant superintendent. Extensive corrections were needed once the customer saw page proofs.

Errors Absorb Profit

Under normal circumstances the customer would be expected to pay for the alterations required in completing this job. But since no dummy was prepared in advance, the burden of responsibility lay on the salesman. The additional production costs in this case were absorbed from profits.

In plants where layout departments are not available, it is the responsibility of the salesman to cooperate with the production department in every way possible to lower production costs and increase profits. A well prepared layout or dummy can help greatly.

One superintendent, whose plant has a good profit record over a period of years, said: "We have our salesmen make a layout, even if it is only a simple one, for each new job they turn in. We have found that this procedure directly reduces costs and increases profits. Our salesmen have also found that this extra effort is profitable to them, too.

"It saves them time in the long run because we don't have to have half a dozen conferences to find out what the customer wants. And, of course, we get their jobs out quicker, more accurately and more profitably. It goes without saying, that the customer certainly appreciates this extra service."

Several superintendents were of the opinion that many salesmen do not know enough about printing papers and will not take the time and trouble to learn. "In some cases," one said, "it would improve the job to use a different stock and run it offset on a faster press. Makeready and press time could be saved in addition to engraving costs. Since the job had been run letterpress before and the salesman had a limited knowledge of stock, he did not see the possibility of improving the profit picture with a little thinking and salesmanship."

On the other hand, this superintendent pointed out, if a salesman knows paper he can save his customer money and add profit to the job. He may suggest to the customer that the job be run letterpress on a stock the company purchases in quantity lots.

In many plants the most common complaints superintendents had with the sales department were: Poor copy preparation, salesmen's failure to know exactly what the customer wants, and failure to make clear to the production department complete details of the job.

Many superintendents feel the salesman can assist the production department in selection of ink and paper. Wherever possible, salesmen should try to select a standard shade of ink and specify the manufacturer and catalog number on the job ticket. Include a color swatch if one is available. Otherwise, much time can be wasted in mixing inks unnecessarily.

On color jobs, several plant superintendents suggested that salesmen send samples of the exact stock, weight and color to the engraver for customer proofs and progressive proofs. Sometimes press proofs can be eliminated, but on the whole this procedure definitely saves time in the pressroom and matching inks is a quicker and simpler job.

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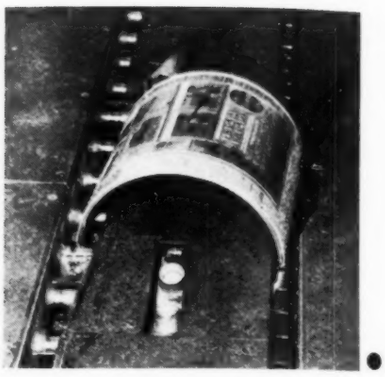
Stereo Plates Sent To Two Pressrooms Automatically



Small photoelectric cell automatically causes conveyor switch to operate just before stereotype plates reach the switch.

BY means of an automatic conveyor system, the New Haven (Conn.) *Register* delivers printing plates from one stereotype department to two pressrooms located in different parts of the same building.

Necessity for the dual purpose conveyor was caused by an unusual emergency arising in the company's modernization and expansion program. Robert A. Hunter, research director, with his associates, were faced with a variety of problems.

One of the problems was where to place the three 550 kv.-a. transformers needed to supply the additional power required by the expanded facilities. The preferred solution to the problem was to relocate the stereotype room from the preplanned location and use the vacated space for the transformer vault.

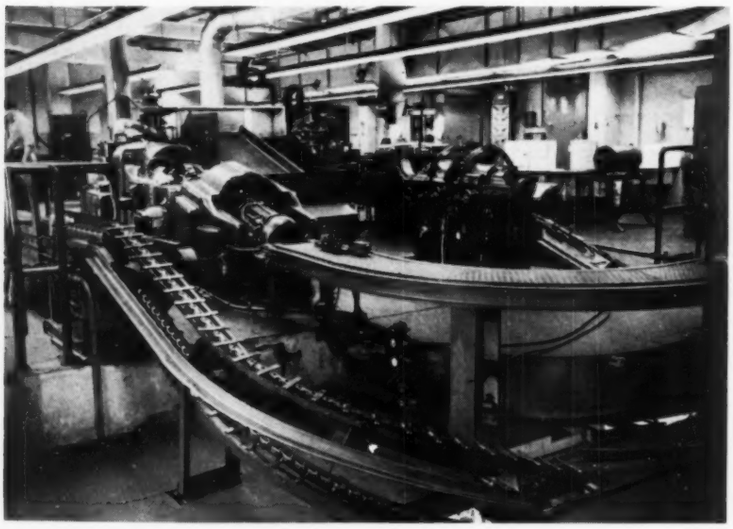
To compound the problem a new pressroom had been built to house the first of two Goss Headliners needed to handle an increase in color and page potential. The original Hoe 12 unit press is housed in a separate pressroom in the old building and is still in daily use printing the three suburban editions of the *Register*. Before acquisition of the new pressroom, the stereotype plates were delivered to the Hoe presses by a simple roller conveyor.

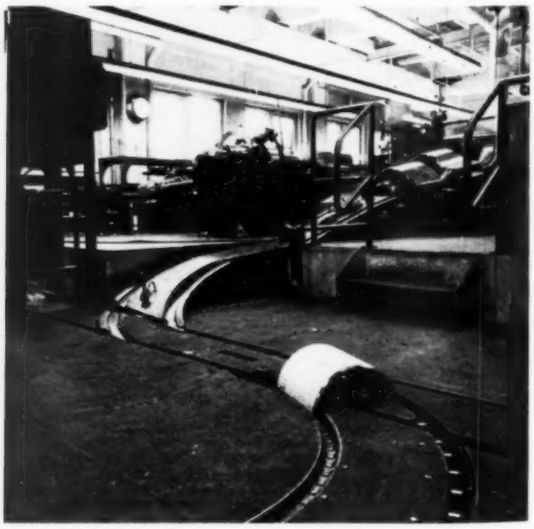
The new stereotype room had been planned to be located adjacent to the new pressroom. The old pressroom would be abandoned after both the new presses were installed and running. The stereotype room floor level is about 3 ft. above the pressroom floor.

The problem of routing and delivering plates to the old and new pressrooms with least handling and confusion was solved by installing an automatic switching conveyor, designed and built by the Gifford-Wood Co.

Designed around a photoelectric cell and a piggyback plate return conveyor system, the equipment is operating successfully.

Operation of the conveyor system is as follows: Stereotype mats delivered from the molding machine in the composing room are placed in the casting box of a Wood Supermatic Autoplate. As each plate reaches the





At left is general view in stereotype department of New Haven (Conn.) *Register*. Through specially designed conveyor system, the stereotype department delivers plates automatically to two pressrooms. At lower left is piggyback section of conveyor which carries plates back to the casting machine when conveyor system is reversed after press run.

Plates are sent from platemaking machine down a ramp to the floor-level conveyor (right picture). Underside of plates intended for new pressroom are sprayed with black paint. Plates for old pressroom are not sprayed. Plates pass over an electric eye just before reaching the switch. The eye actuates switch to send the plates to proper pressroom.

cooling stand of the Supermatic, the operator inspects and marks it for page identification. If the plate is to go to the Hoe pressroom he pushes a button to activate a spray gun. The gun sprays the underside of the plate with black paint.

The plate is then moved to the delivery conveyor and to the pressroom floor level by an automatic plate ramp, which deposits it on the floor conveyor.

A photoelectric cell, set in the floor between the conveyor tracks, scans each plate as it passes. When a plate, which has been coated underneath with black paint, passes over the electric eye unit, the light beam is not reflected to the receiving unit and the circuit is broken. This actuates a solenoid controlled air cylinder which moves a spring loaded deflector at the switching section of the conveyor and guides the plate around the turn, and on to the new pressroom conveyor.

If the inside surface of the plate has not been sprayed, the scanning beam is reflected and the circuit is not broken. The deflector does not move and the plate continues its travel past the switch to the old pressroom.

Plates Returned Piggyback

After a press run has been completed, plates removed from the presses are returned to the stereotype room for remelting by reversing the conveyor system. A unique feature of the return system is the piggyback conveyor which moves the plates from the floor level conveyor upward some 4 ft. and through a 90 deg. turn to the stereotype room return conveyor.

This unit consists of a pintle chain with 8 in. cross bars welded to the chain links at intervals of about 10 in. As the plate moves off the floor conveyor, these bars engage the ribs on the underside of the plate and carry the plate forward and upward to the gravity conveyor which carries the plate close to the metal pot for temporary storage or for immediate remelting.

The Wood Supermatic Autoplate normally produces a finished page plate every 16 sec. This is ample capacity for the *Register*, which runs 64 to 80 pages daily and up to 128 pages on Sunday. Weekly average is 1500 plates.

Survey of 'Going Offset' Brings Favorable Response

WOULD you 'go offset' if you had a second chance?" Yes, said 51% of the 80 replies from publishers in 36 states.

Joseph G. Terry, manager of the Newspaper Div., Wolf & Company, Chicago, revealed this information in a preliminary report on a study by his company of newspapers adopting the offset process. The report was delivered during the 37th annual convention of the Pennsylvania Newspaper Publishers' Assn. in Philadelphia.

Terry said his findings showed the transition period required to change from letterpress to offset was variable from a few weeks to two years. A few newspapers indicated that they tried offset but have already gone back to letterpress. Weekly newspapers comprised 90% of the study.

Effect on Employment

In reply to the question "Were there any net savings in the number of employment situations?" 20% stated there was. However, while the number of situations was the same, several reports noted the average cost per employee was less.

Terry said it was unanimous that the greatest saving took place in composition when switching to offset. Approximately 75% of the replies indicated a preference for training employees in offset procedures rather than hiring experienced help. Only 20% of the publishers said they were able to hire trained employees. Trained personnel, if available, would be hired by 37% of the publishers, while only 26% indicate they would probably hire trained employees.

These two answers are somewhat contradictory, but since it is necessary for publishers to master the art themselves and take time out to train employees, it is natural they would much prefer to become publishers again and assign duties to those who are already trained in the profession.

Under the questionnaire heading of Public Reaction, 86% stated that advertisers prefer offset to letterpress; 90% of the readers prefer offset to letterpress.

Production of the newspaper reveals 52% print tabloid size. It must be remembered that the majority of advertisers prefer standard size, whereas, the majority of readers prefer tabloid. Consequently, the newspaper going offset which can print standard size might obtain better advertising results, Terry stated.

Of the machines used for straight composition, 35% of the newspapers prefer the Justowriter; 47% prefer Headliner for heads. Many publishers stated that heads could be produced on Ludlow equipment much faster and more satisfactory.

Terry revealed that the Harris press is used by 45% of the newspapers involved. However, the trend for larger newspapers is to the web offset press. Press equipment is owned by 71% of the publishers, 54% being web presses. Those who do not own press equipment must travel from ¼ mi. up to 50 mi. to get presswork done. It was noted that 74% of the newspaper publishers who own equipment do work for others.

Plates are made by 75% of the publishers. Of those who do work for others, 90% make the plates; 93% know how much it costs for platemaking. Newsprint is furnished by 96% of those doing work for others. A handling charge of about 25% is added over and above the cost of the newsprint.

Inquires Into Costs

Terry's inquiry into the cost per page showed that 34% do not know composition cost; 38% do not know plate work costs, the cost of newsprint or the cost of presswork. The survey also showed that 80% of the publishers are developing outside presswork and find it to be profitable. Production speed of offset as compared with letterpress is satisfactory to 80% of the publishers as it pertains to composition, platemaking and presswork.

The cost of maintaining typesetting machinery under letterpress

continued on page 103

PIA Eyes A Changing Printing Scene

1000 members of Printing Industry of America told they must face changes in their businesses; elect Sperry president

By EDWARD H. OWEN, *Editor*

LAST month, members of the printing industry's largest management association, Printing Industry of America, meeting in convention, reviewed and examined their current problems while speaker after speaker cautioned that changes are occurring around them and more are to come.

The convention was PIA's 75th, billed as the Diamond Jubilee, and was held in Pittsburgh on Oct. 9-14. Well over 1000 attended the week long conclave which included meetings of special printing industry groups allied with PIA.

Among the top events of the PIA week were a presentation on guides to long range planning and a two day program devoted entirely to discussing the industry's production situation (see story, page 60). The program on industry trends centered mostly around the continued growth of lithographic printing which was termed ". . . probably the most important Graphic Arts trend in our time."

Ehrenberg Makes Final Report

PIA members also elected a new association president, Oliver R. Sperry, who is senior vice president of R. R. Donnelley & Sons Co., Chicago. He succeeds Francis N. Ehrenberg who completes a busy year as head of the national association. In business life, Ehrenberg is president of Blanchard Press, Inc., Garden City, N. Y.

Next year the convention is to be held in Montreal, Can., at the Queen Elizabeth Hotel, Oct. 1-6.

Ehrenberg, in his final report, called attention to the changes that printers must face. One is a partial dislocation of the industry's working force because of the present international situation.

Ehrenberg said he was impressed in his travels the past year with the stress on youth being made by many printing companies. Older management, he remarked, has recognized the need for younger developed organizations. He called this an encouraging sign in the printing industry. He said it shows recognition for the need to advance, for retooling, for recognizing people, and for finally dealing with them as individuals. The PIA president also reported that the printing industry will be used as a field for diversification by other industries.

Ehrenberg Climaxes Busy

New PIA officers, left to right, are: Mendel Segal, secretary; Max B. E. Clarkson, vice president; Oliver Sperry, president; Francis N. Ehrenberg, retiring president, and Arthur H. Gratz, treasurer. In far right picture, Ehrenberg receives a check from Edward McSweeney for continuance of the PIA Executive Development Program.

READ how Printing Industry of America dealt with important production decisions during its Pittsburgh convention. This interesting report is on page 60, this issue.

The convention keynoter, Robert A. Weaver, Jr., prominent in international business circles, said that he did not believe that there would be a world atomic war. Weaver is chairman of the Executive Committee of the new compact national newspaper, *World*.

The communications media are of vital importance in this era of world tensions, Weaver said, and pointed out that he felt the printers of America represented one of the keys to communications. Outlining efforts that could be taken for preparedness on the part of the printing industry, Weaver stated: "We will avoid an atomic war if industry as well as government and people prepare for the worst, let it be known that we are ready, and then aggressively and positively expand our economy by individual action and by business expansion."

Advocating a mature approach to preparedness, the keynoter recommended having a preparedness committee in each printing company which could draft plans in the event of a crisis (subject of a PRINTING PRODUCTION September issue editorial). He said that the U. S. must be mentally and physically prepared to resist aggression.

A team of Harris-Intertype Corp. executives, who presented the program on printing industry trends, kept the PIA members' attention on printing's changing scene. With seven huge, colorful charts forming a backdrop to illustrate and document the points they made, each team member carefully discussed printing industry trends from an over-all point of view.

Printing Industry Trends

Richard B. Tullis, H-I executive vice president, credited built-in growth trends for the printing industry's favorable position. He identified these as advertising and supermarket-type packaging, and an expanding economy which develops new markets for us, plus the fact that Americans are doing more and more reading for both knowledge and pleasure.

Harris-Seybold Div. president, George C. Houck, emphasized that there is an important trend toward increased use of large multicolor, sheetfed offset equipment and expects the continuation of this trend. He bases this on the ever-accelerating demands for more color in advertising and printing generally, and longer runs caused by the population explosion and the increase in leisure time reading. Forward planning, according to Houck, is printing management's best tool in taking advantage of the strong growth trends within the industry.

The trends in typesetting will be in the direction of refinement and simplification of machines now available, both hot and cold type, according to Martin M. Reed, H-I vice president-international. Printers will be preoccupied with the selection of the proper equipment to economically suit their own particular applications. "Whether these applications require tape operated machines, simplified hot metal equipment, or phototypesetting should be determined by the economics involved," said Reed. He added: "New and even more legible type faces will continue to come from the type designers—each striving to produce faces adapted to today's necessity for speed reading and today's typesetting and printing processes."

Growth Ahead for All Processes

The continuing trend to more process color pages in national publications produced by ultra high speed web letterpresses was identified by Charles M. Baker, Jr., vice president and general manager of Harris-Intertype's Cottrell Div. He anticipates growth in rotogravure, flexography, and particularly in web offset.

Longer runs and new products, due to the population growth, together with the continuing demand for color, were cited by Baker as favorable factors for web offset's continued growth within the commercial printing field. "The trend of weekly newspapers to use offset should extend to the smaller circulation dailies as fast as offset platemaking techniques are developed," Baker said.

The trend toward greater automation of printing, bindery and typesetting equipment, which has largely resulted from the wage-price squeeze, was discussed by W. Ray Spiller, H-I vice president-engineering. He mentioned the increases in speeds during the past 10

Year in Top PIA Post

In appreciation of Ehrenberg's service, Oliver R. Sperry, new president, presents him with a silver tray. In near left picture are two winners of stock certificates given as door prizes. Left to right: C. H. Thunell, Pitt Litho, Pittsburgh; Chas. Shapiro, Hopper Paper Co., Taylorville, Ill.; J. M. Neibarger, State Printer of Kansas, and Ehrenberg.

PIA past presidents honored at the Diamond Jubilee convention, left to right, are: John M. Wolff, Ray Blattenberger, Reuel D. Harmon and Col. H. R. Kibler.

Former presidents of PIA, left to right, are: Walter F. McArdle, James L. Cockrell, George H. Cornelius and George R. Keller.

Four of the 12 PIA past presidents in Pittsburgh, left to right, are: J. Richard Jackman, Otis H. Johnson, Francis N. Ehrenberg and Kurt E. Volk.

years, the trend toward continuous operation of both press and bindery lines, the trend toward know-how built into the equipment, and the trend toward more advanced electronic controls. Then there is the over-all trend, he said, toward greater productivity with emphasis on the part of both printing management and the printing equipment manufacturer for a reduction in non-chargeable hours.

Spiller summarized his remarks with these words of caution: We should recognize that while the rapidly accelerating pace of the application of modern scientific developments to our equipment and processes is healthy and good for our industry, it is also costly.

We should be alert to new developments, be informed as far as possible of the significance and implications, and be able to relate this information to our own particular problems and abilities. This is life insurance, he said.

We should realize that there are dangers in being over impressed by the glamour of new ideas. Fevers, fads, and over-emphasis on new technical developments tend to obscure the real and fundamental trends. There is extra expense and risk to those who adopt advances, but real progress matches short term expenditures against longer term gains and requires foresight and a venturous spirit.

Present Growth Trends Should Continue

Tullis summed up for the executive team as follows: "The same positive forces are still at work. Present growth trends within the industry should continue. Barring adverse international developments, we can be sure in crystallizing our forward plans that the rate of advancement of offset lithography, of advertising in general, of packaging, of process color, of the technical proficiency of our printing and equipment, and of printing management will continue to accelerate during the period ahead."

At the end there were questions from the audience, one of which concerned the design of typesetting machine keyboards. Reed said he feels there will be a further decline from utilizing the conventional linecasting machine keyboard. Printers can expect to see more of the typewriter-like keyboards come into use.

There was also the inevitable query on why the equipment manufacturers have not pursued development of dry offset. Tullis first remarked that the wrap-around method of printing may be the answer and then deferred the question to Spiller. The engineering vice president said that because of the problems with plates, ink and transfer of image, it appeared that it is better to print directly from thin relief plates rather than utilize an offset blanket. There was also a question from the audience regarding the outlook for wrap-around printing on web presses. Tullis commented that it must first be worked out on sheetfed presses.

New UES, MPS Presidents

Among other convention highlights were the discussions of PIA's two labor groups—the Union Employers Section and the Master Printers Section. Oran I. Brown, Rand McNally & Co., Skokie, Ill., was named president of the UES, while J. Paul Whitehead, Heminway Corporation, Waterbury, Conn., was elected president of MPS.

The PIA Executive Development Program, inaugurated last summer at Western Reserve University in Cleveland, will be continued next year with two sessions scheduled for the same institution. A check for $10,000 was presented at the convention representing a grant from the Louis Calder Foundation for sponsor-

This was the setting as Harris-Intertype executives discussed the changing patterns and trends in the printing industry. Left to right are Charles M. Baker, Jr., George C. Houck, O. R. Sperry (moderator of the meeting and new PIA president), Richard B. Tullis, W. Ray Spiller and Martin M. Reed.

ship of the program for executive development.

Named Graphic Arts Man-of-the-Year was William H. Bulkley, vice president, Connecticut Printers, Inc., Hartford. He was presented with the A. F. Lewis Memorial Award for 1961.

Education for the 1980s was discussed by Dr. Melvin L. Anshen of Carnegie Institute of Technology. Speaking to 75 Carnegie printing alumni, Dr. Anshen said: "We must build our Graphic Arts management structure on the firm knowledge that the answers which are good today won't necessarily work tomorrow. We must cope with an evolving world and a changing management situation."

Dr. Anshen envisioned an extended use of mathematics and science in the area of problem solving. "More and more we are continually getting away from the old idea that managers are born and not made . . . for they are made," he said.

How to Measure a Leader

Prof. George S. Odiorne, director, Bureau of Industrial Relations, Univ. of Michigan, Ann Arbor, Mich., sparked the general manpower session in telling how people produce profits and later outlining how managers make things happen.

"A leader is measured by his followers," Odiorne stated and stressed leadership as the key in getting people to be productive. Your qualities as a leader determine the quality of your followers, he said.

Money alone cannot be used to motivate people, Odiorne said. Workers want recognition and a sense of belonging and should be made to feel adequate and secure. A business suffers unless the needs of employees are reconciled with the needs of the business, he added.

A manager is one who delegates, works harder than others in an organization and also "watches things happen," Odiorne indicated. Among things a manager does to make things happen are: Setting of goals, deciding what is to be done and then leading an organization toward these goals; "rebels against any static situation which he is in," and relies on the ability and ideas contributed by others. He also generates a desire for others in his organization to excell and has the ability to overcome obstacles. Business failures are not caused by obstacles but by the inability of management to overcome these obstacles, Odiorne concluded.

George Truell, industrial relations manager, Graphic Controls Corp., Buffalo, N. Y., reported on an employee survey taken at his plant to determine employee morale and effectiveness of the firm's production level. Conducted by an independent research association, the survey obtained information and arrived at results for specific departmental groups. Meetings were held with departmental personnel at which time the survey results were discussed and employees were asked for aid in solution of problems occurring within their own work areas.

Oran I. Brown, industrial relations director, Rand McNally & Co., Skokie, Ill., told of the practice at his plant where apprentices spend one week in front office departments to gain an insight into problems connected with management of the firm. Journeymen also participated in a similar training program and these programs aided estimators, accountants and schedulers in better planning of their work, Brown reported.

The need for more and better supervisory training was stressed by Clarence R. Wolever, manager, Eureka Specialty Printing Co., Scranton, Pa. He indicated that a firm may be heading for trouble in taking over a management training program of another company without first changing the program to fit its own plant and operations.

Manning the convention press headquarters where a daily newspaper was published are John Jay Daly, PIA public relations director; William Gaul, Harris-Intertype public relations director, and Ed Brown, Herbick & Held Printing Co., Pittsburgh.

What will happen to letterpress?
How much will offset grow?
Is there a future for rotogravure?

Printing's Next HALF-CENTURY

By GYAN P. MADAN
Printing & Journalism Dept.
South Dakota State College

WHAT will printing methods be like 50 years from now? Processing techniques and equipment already are changing and will continue to change. Let's take a look. But first let's mention the causes for the changing production picture.

Trends in creative and industrial advertising have given rise to new printing methods. A significant portion of the changing picture is caused by necessity for meeting the demands of increased volume and faster production. As a result, there is increasingly keen competition among letterpress, gravure and lithographic printing methods to produce a variety of printed matter at lowest production cost.

Recent popularity of web offset presses has labeled letterpress a slow and cumbersome as well as complicated and expensive process for certain types of work. Web offset presses are now being used for an ever-increasing range of products, including quality process color. Some 500 weekly and 40 smaller daily newspapers are also printed web offset. In short, production figures are rising in offset printing faster than in any other printing method.

Gravure is moving ahead too. Because of its high speed, its improved methods for automatic register control, and its suitability for printing on almost any kind of surface, it has become an important process in the packaging industry. Some Sunday newspaper sections are also printed by rotogravure.

Workhorse of the Processes

During the next half century, the classic letterpress process will remain the industry's workhorse, but the adoption of new techniques and machines will be required.

There is a lot of development work in progress with respect to improved engraving and electrotyping methods through which plates can be produced faster. Many new ideas to reduce makeready time are being pushed in practically every letterpress operation.

Hand composition and machine composition using type metal will remain, but will be used little in direct printing forms. More and more phototypesetting methods will be adopted. Also, much letterpress printing will be produced from plastic as well as metal plates.

The use of scanners to obtain engravings electronically will increase. Future letterpress printers will also use more rubber-like plates made in vulcanizing machines from original composition, etchings and electronic engravings.

Letterpress printing will continue to strive for high speed presses and fast makeready techniques. Many flatbed letterpress operations will change to single and multicolor rotaries.

Despite close competition with offset and gravure for printing cartons, letterpress will always do the best job in printing high color-intensity solids.

First editions and quality book printing will remain a domain of letterpress. However, there will be some trend towards printing books by web offset. But this will apply mostly to reprints which have been produced previously by offset.

Due to the limitations imposed by publication timing, technical operating knowledge, high waste figures, high ink cost, and high composing room cost in web

offset printing, the large dailies will most likely continue to be printed letterpress for an indefinite time. The use of ROP color in dailies will increase and will force the newspaper industry to develop better ROP color reproduction. Otherwise, it will lose its advertising revenue to preprinted color rolls.

The large circulation magazines which contain mostly color illustrations will remain letterpress and will be printed on improved coated stock with improved heatset inks on high quality, fast running special presses with special drying facilities.

Expansion in the Offset Picture

The future commercial printing probably will show a further gain in the use of offset printing, but will eventually level off with letterpress. Most of the future medium and small printing plants will have both letterpress and offset facilities.

Offset lithography has experienced technological innovations during the past few years and will continue to expand its output volume through new processes and machines.

There is already some shift in the printing techniques of weekly and small daily newspapers. Development of typewriter-like typesetters, phototypesetting machines, printing and platemaking techniques and other reproduction equipments, have accelerated offset's growth. It can be said that web offset will continue to gain more ground in the production of smaller newspapers in the areas outside the big cities.

Offset newspaper plants have found printing by offset to be versatile. Cold type composition and pasteup which is faster than the hot metal method enable these plants to use nonskilled labor.

Almost anything that can be photographed and produces a negative good enough for platemaking, can be printed offset. Many printers of weeklies make copies from clippings of advertisements that have appeared in other publications. They place these in proper position on the pasteup with cold type composed characters and prepare a negative in the camera.

Newspapers Praise Web Offset

Some weeklies have praised web offset for its excellent reproduction of type and halftone illustrations, a factor due to the high pigment strength inks and the fine halftone screens used in offset. Offset screens are usually 120 to 150 lines per inch as compared to 65 to 85 lines per inch for letterpress. When plates are run with full ink coverage, these fine screens print sharply and in bright detail.

Despite all the favorable points in the application of web offset to newspaper printing, there are some drawbacks. Presently the production of newspapers by web offset costs comparatively more than letterpress. Many people believe that the future growth of web offset in the newspaper field mostly will be governed by the solution of factors responsible for this high cost. The ink cost will have to be cut down. The paper waste will have to be reduced. The composing room cost will have to be minimized. The page capacity and speed of web offset presses will have to be increased to meet the challenge of the future.

Research organizations and manufacturers have already begun work on some of these problems. Printing management is also taking interest in the training of plant personnel to enable handling all operations properly and thus to reduce waste. It is also hoped that future developments in photocomposition will result in phototypesetting equipment for setting news, the operation of which will be activated through use of wire services.

This will be dependent, of course, on subscriber willingness to accept column standardization and the time limitations imposed in the newspaper publishing field, plus rapid production of multiple page plates for fast printing.

Other areas in which web offset can be expected to grow include publication printing and packaging. In publication printing, multicolor web offset will continue to compete with the corresponding letterpress magazine presses, up to a certain minimum level of production, above which gravure printing will be found more economical. Although some of the nation's publication printers have already switched operations to web offset, their future success lies in improving the quality of print up to a point where they can equal it in sharpness, trueness and the color of letterpress print. It has also been predicted that some large metropolitan daily newspapers will utilize web offset in the future for printing preprints and supplements.

The future shows little promise for offset in packaging except for some specialty items. It has already lost in the areas of carton, film or foil printing, where specially built gravure presses are becoming increasingly popular. In the commercial field, the development of better and faster sheetfed offset presses will continue. These presses, because of the simplicity of operation and faster plate preparation will challenge future letterpress commercial printing.

The printing industry will experience demands for more and more multicolor printing. Technical progress in color reproduction techniques will introduce methods which will be simpler and more effective.

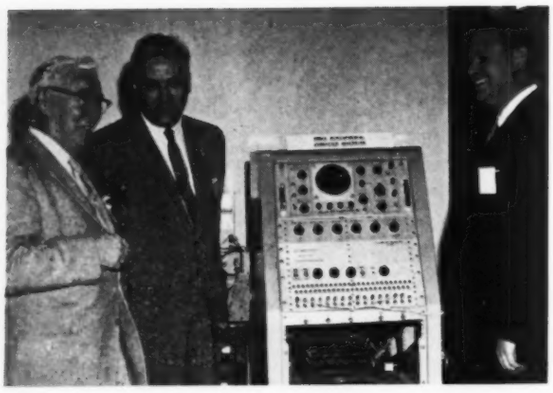
Most of the future color work will be produced on automatic color scanners to reduce the labor cost. The future customer will also be more critical. He will demand a greater degree of accuracy and quality control in print. Plants doing multicolor printing will use many new instruments for color measurements and thus, will make for a more scientific approach. This will provide an impetus for the manufacturers to make better paper, ink and photographic material.

The Future of Rotogravure

Sunday newspaper sections will continue to be printed by rotogravure in ever improving quality and speed. New inks, new methods of masking and color separation, and automatic register controls on gravure presses have helped greatly and certainly will be perfected further. The present trend of pre-printing single and multicolor advertising pages on gravure presses and then rewinding them, will increase.

The use of gravure presses combined with in-line processing machinery for packaging needs will remain and probably become stronger because of the greater

continued on page 98



CBS's J. Kenneth Moore (right), explains to R&E Council members a proposed composer-printer for producing typesetting makeup on film for directories, catalogs, etc. At left: James R. Bowler, Courier-Citizen Co., Lowell, Mass., and Joseph R. Mezey, Jersey City (N.J.) Printing Co.

Plans System to Speed Directory Setting, Makeup

IT is now possible to plan for typesetting-makeup speeds so high that an 1800 page telephone directory could be completely revised and made ready to print in a single day. This was one example cited before a seminar which was attended by 60 representatives of the Graphic Arts Research and Engineering Council held recently at the CBS (Columbia Broadcasting System) Laboratories in Stamford, Conn.

The demonstration was conducted by J. Kenneth Moore, manager, Digital Techniques department. It was centered around the Vidiac GA-1000, a proposed Graphic Arts composer-printer for producing repetitive printed information (such as directories, catalogs, etc.) on film from control signals generated by digital information processing systems. The film output of the proposed system is expected to be of a quality equal to the film conventionally produced for the making of letterpress and offset plates.

Moore explained that alphabetizing, inserting, deleting, collating, page makeup and typesetting could be accomplished by the GA-1000 in conjunction with a digital computing system at the rate of 2000 characters per sec.

"In the future," added Moore, "the system may be applied to the revision of encyclopedias, classified ads in newspapers and textbooks."

In view of the system's potential to the Graphic Arts industry and because the system can still be altered in its present stage of development, the R&E Council encourages its members to make known their suggested performance requirements. The Council will act as a clearing house for the suggestions submitted.

PIA Bennie Winners—Winners in the Miller-PIA Self Advertising Awards Contest are shown holding their Benjamin Franklin statuettes presented at the PIA convention. Seated, left to right: Willis Frank, Bay State Press Corp., Boston; William Young, president Miller Printing Machinery Co.; Miss Mimi Turque who presented the awards, and Harry Gardner, Wm. G. Johnston Co., Pittsburgh. Standing: Paul McConaughy, Princeton (N.J.) Printing Co.; Leon Cooperman, Fox Press, Hartford; M. F. Rudolf and Howard Kaneff, Ar-Kay Printing Co., New York; R. Burke Stanard, Commercial Printing & Letter Service Co., Dallas; Henry Henneberg, P.A.P., Monrovia, Calif., and Carleton Cummings, Herbick & Held Printing Co., Pittsburgh.

Offer Ideas for Trade Binders

Production ideas slated for use in binderies were offered members of PIA's Trade Binders Section and newly formed Loose Leaf Div. meeting last month in Pittsburgh during Printing Industry of America's convention.

During a panel on heat sealing problems, Ivan Schwartz, president, Thermatron Div., Willcox & Gibbs Sewing Machine Co., New York, recommended that heat seal equipment be operated within a hexagonal enclosure made of copper or aluminum and that power lines enter the room through special long life filters. He also suggested that all metal piping, such as an air line, be broken at the point of entry with a rubber hose and that technicians make regular checks to ascertain the amount of radiation present.

Schwartz noted the increased use of decals on vinyl binders and predicted a rapid movement toward books with covers that contain no board and that are cased-in electronically.

Lighting requirements have been accurately determined for binderies and anything less than 70 foot-candles can only result in poor work, Gerald C. Quinn, electrical editor, *Factory* Magazine, New York, stated. Poor maintenance of existing lights and permitting motors to become overloaded were other factors listed that lead to high maintenance costs. Interlocking connection on air and water lines, so that both cut off when a machine shuts down, will also save money, he concluded.

"Plant layout can and should be the materialization in tangible form of all duties, the policies and the goal of management," Olin E. Freeman, management consultant, Chicago, commented. "Planning a new or revised plant must embrace fullest consideration of present and anticipated demands upon the production facilities. The best possible forecast of the nature of final products and of production operations required for at least the next five years is an essential."

Freedman outlined that a plant layout which will serve its full purpose will reduce waste of both effort and materials.

LAST OF A TWO-PART SERIES

Offset Press Web Control Systems Analyzed

Functions and operation of each type of control are illustrated and explained

By HERBERT L. WEISS
Crosfield Electronics, Inc.

IT is not necessary to buy gold when brass will do in selecting color register, ink and cutoff controls for web offset press equipment.

The various types of automatic control systems available are analyzed here for those who are interested in comparing the basic controls. In this way, the type most satisfactory for your needs can be determined.

Each control system offers something different. Consequently, the over-all long range picture should be obtained before making a decision.

Circumferential Controls

Automatic circumferential control systems are designed for cutoff, backup and running color register duties. Various types are explained as follows:

1–Fixed Correction Type – This register control corrects the register mechanism only when the error exceeds a predetermined dead zone. The control system then puts in a fixed amount of correction. This system has a tendency to hunt and cannot keep up with rapidly changing errors. In general, such a system is not satisfactory for high speed web presses, and mostly is used in the packaging field and in overwrap applications where close register is not required.

The diagrams in Fig. 6 demonstrate why a fixed type of correction system cannot keep up with error changes on high speed presses.

2–Proportional Control System– The proportional control system measures the amount and direction of error, and makes corrections proportional to the error. Simply, this means that the control system will move the correction mechanism an amount equal to the amount of error measured.

Such a system will hold very good register at steady press speeds, but with rapid error changes, such as at startups, slowdowns and at pastes, it will lag behind the error. The system tends to overcorrect on decreasing errors and undercorrect on increasing errors.

When the rate of error change is small, such as at steady press speeds, this system may be adequate. There are several variations in proportional controls, such as systems combining fixed corrections for small errors and proportional corrections for larger errors.

The limiting factor with any control is the length of time or number of revolutions required between one correction and the ability to introduce a second correction. It is impossible to change the relative position of the print on a moving web instantaneously. In general when a correction is applied to a moving web, the web tension is changed and the web is stretched. The time involved for this web stretch to change to print displacement is proportional to the length of web between operations.

At least one to one and a half times the amount of web between the last unit and the folder must pass through the press before the correction applied to the folder compensator is effective on the web.

If there is 20 ft. of paper between nips, and cylinder circumference is 24 in., anywhere from 10 to 15 revolutions must occur before the correction has completely moved the print displacement on the web. If a new correction is applied before that time, the proportional system will overcorrect.

In other words, if there are 10 element lengths between units and the correction mechanism is moved 0.010 in., each element length will change by 0.001 in. As each element moves through the machine, it will come into register by 0.001 in. until all 10 element lengths have passed and the web is in register. In actual fact the correction will be slightly slower because new material is being introduced at each revolution.

How the proportional controls

operate is explained in Fig. 7.

The rate of change feed-back or predictor controls system measures both the actual error and the rate of change of the error. The controls then add or subtract from the proportional measurement to compensate for the rate of change and direction of change. The result is a correction based on the error as it will be a few revolutions later when the correction becomes effective on the web.

The system uses a memory circuit which allows comparison on each error reading with the previous error. This allows a rate of change factor to be established. Since the correction is always adjusted to compensate for rate of change, this type of control can correct more frequently without compounding errors, or causing hunting or instability. This enables the control to accurately track rapidly changing errors such as occur in startups, speed changes and at pastes. This prevents overcorrecting and undercorrecting.

Because the system measures the error and the rate of change in error, it can throw in a new correction before the previous correction is completely effective, if it computes or predicts that the error is not correcting fast enough.

If the error is diminishing at the proper rate, it will not put in another correction. If the error is being corrected too rapidly and overcorrection will occur, the system puts in a negative correction in advance to prevent overshooting.

All register controls are servo systems. From an engineering point of view, no servo system is complete without a rate of change feed-back system.

In Fig. 8 it is explained how the rate of feed or predictor controls operate.

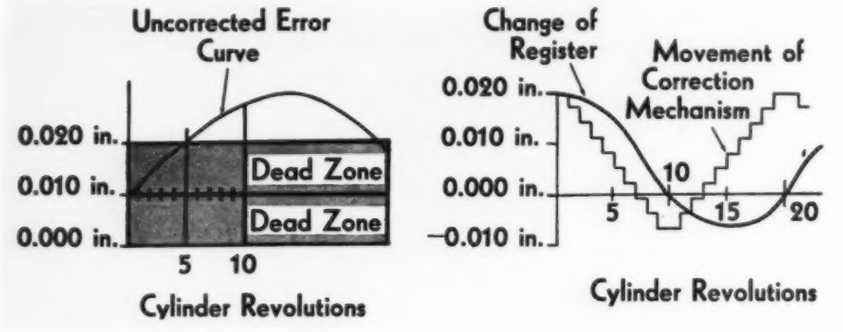


Fig. 6—Principles of fixed register correction system.

This system (left) will only throw in a correction when the error exceeds the dead zone at revolution No. 5. When a web of paper is being corrected lengthwise for register, it responds rather slowly to the movements of the register mechanism. If a correction of fixed magnitude is applied at frequent intervals the result will be a hunting action as shown. The graph at right shows a correction for each revolution. Even at this frequency the correction responses tend to lag behind the change in register.

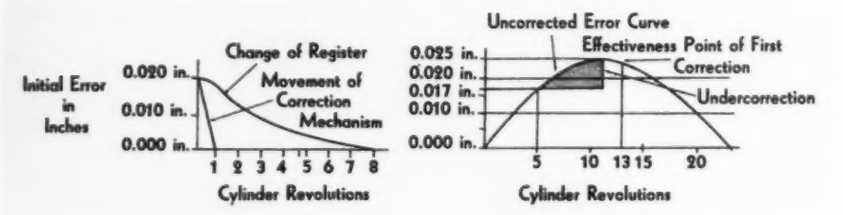


Fig. 7—How proportional controls operate to correct misregister.

The chart at left shows the time delay incurred after the correction mechanism makes its corrections; also it shows the point at which the error is completely removed.

The correction mechanism completed its corrective action at the end of the first revolution, but the error was not completely removed until the eighth revolution. The cycling frequency of this press, at this speed, is therefore at least eight revolutions. If a second error reading is made and a correction applied before the eighth revolution, the error measured would be a false one, as it had been measured and corrected for previously, but the delay in effectiveness has still shown some error remaining.

The chart at right shows the effect of proportional controls on an increasing error. If the initial error remained constant the correction applied would have reduced the error to zero at the end of eight revolutions. When the rate of error changes the problem is that the corrections applied will not equal the error at that point of complete effectiveness on the web (eight revolutions later).

If this system measured an error of 0.017 in. in the fifth revolution and then applied a proportional correction of 0.017 in., this correction would not be large enough to remove the error that would exist at the next correction cycle at 13 revolutions. When the correction is applied it would result in an undercorrection of 0.008 in. as the error rate would have increased from 0.017 in. to 0.025 in. in these eight revolutions.

Web Side Guide Systems

The various types of error measuring systems, rather than the type of correction devices will be considered under this heading.

To obtain the correction the reel may be moved by means of a reel stand marginal motor, or the web may be moved by means of tilting rollers, or sets of rollers. The length of web from the reel to the first unit must be considered. Also, the maximum amount of error likely to be encountered is important in determining the type of control system. The controls may move either the reel or the rollers or both. Two types of moving roller assemblies are illustrated in Fig. 9.

1—Mechanical Measurement — This system is the simplest, and consists of a micro-switch that is moved by the side weave of the web. This system is almost never used on high speed presses, as its accuracy with offset papers is poor.

2—Vacuum Error Measurement— This system usually has a pattern of holes or slots resting on or near the web. The principle of operation is that variation in position of the web produces corresponding variations in vacuum. The controls are set so that at a specific vacuum the control is dead. An increase in vacuum causes a correction in one direction. A decrease in vacuum causes a correction in the other direction.

This system utilizes a dead zone, with continuous correction of error until the web is back in the dead

zone. The major problem of these systems is that they are not proportional to the error and tend to hunt. In addition the vacuum holes can be clogged up with paper dust and record a change in vacuum thus producing faulty corrective action .

3–Photoelectric Light Intensity Measurement–This improved system measures the error by photoelectric means rather than by mechanical or vacuum methods. A scanning device is placed over the web and a light from the head may be reflected into a phototube, or shine directly into it. The principle of measurement concerns itself with the amount of light projected into the phototube. In principle it is similar to the vacuum method. If the web is in the center position one-half of the light will fall into the phototube. As the web moves from side to side, the amount of light will vary, and this acts as a basis of measurement.

This system is seldom proportional and the system usually corrects until the error is within the limits of the dead zone. The tendency is to hunt. The problem with this type of error measurement is that the amount of light received in the photocell determines the error. Paper dust, ink mist, or other matter on the scanning head will reduce the amount of light received and erroneous corrections will be applied.

4–Photoelectric Rotating Lens Measurement–This system utilizes a phototube to measure the error, but a time-space measurement is made rather than a light intensity measurement. The scanning head contains a small motor which has a disk with lenses in it attached to its shaft. As the lenses rotate, a series of small spots of light are projected onto the web, and each spot sweeps across the edge of the web. When the light first appears on the web it is reflected back into the photocell. This system measures the interval between the appearances of the light spot, and its disappearance off the edge of the web. This interval is proportional to variations in the position of the edge of the web.

Since the intensity of light is not important to the measuring system, the controls are not handicapped with dust or lamp brightness. Only the measured time interval is vital.

This system can be utilized with the proportional, or predictor type of controls.

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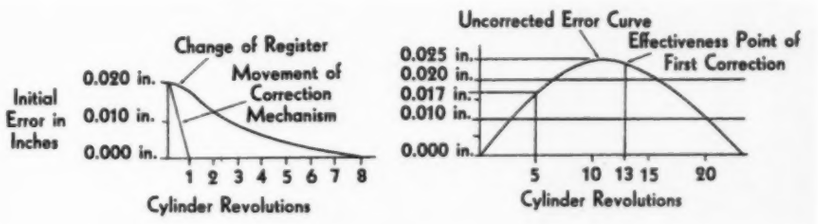


Fig. 8—Operation of rate feed-back or predictor register controls.

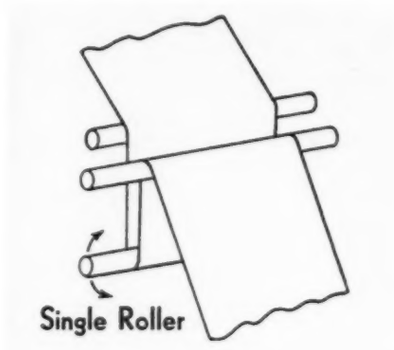
The chart at left shows the time delay incurred after the correction mechanism makes its correction, and the point at which the error is completely removed.

The correction mechanism completed its corrective action at the end of the first revolution, but the error was not completely removed until the eighth revolution.

The chart at right shows the action of the rate of change feed-back, or predictor principle.

The controls measured an error of 0.017 in. in the fifth revolution, and an increasing error rate of change of 0.0085 in. for the first five revolutions. The correction applied equals an algebraic sum of both factors, or 0.0255 in. in this case.

By combining the error reading with the rate of change the resultant will eliminate the common problem of undercorrecting on an increasing error, and over correcting on a decreasing error. This type of corrective action is accurate in tracking fast moving errors at speed changes and paste cycles.



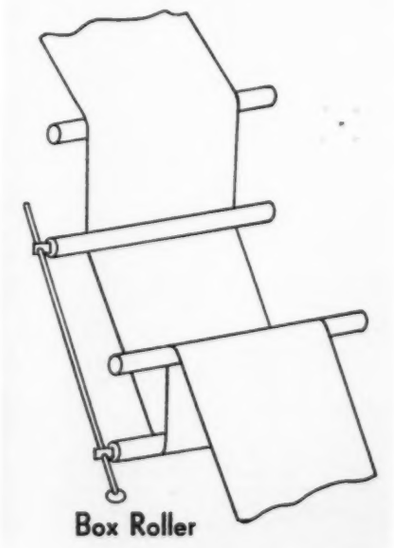


Fig. 9—Web side guide systems in web offset presses. Controls may move either reel or rollers, or both. Two types of moving roller assemblies shown.

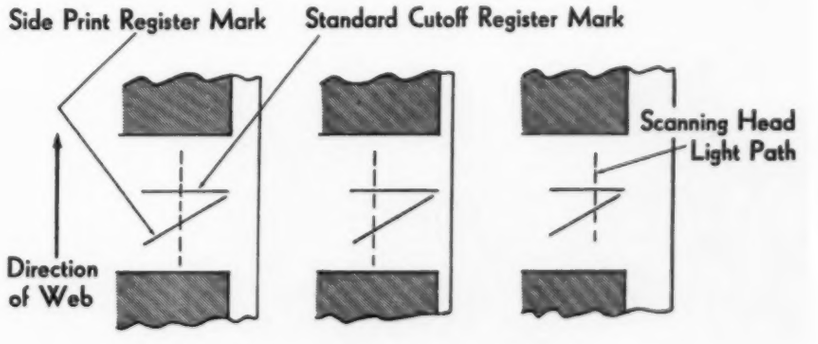


Fig. 10—Principles of side register to print controls.

(1) Print is in correct side register and the time differential is known.

(2) Print has moved to right; time differential between two marks is greater.

(3) Print has moved to left and time differential between two marks is less.

SEE GOSS

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ist of "firsts"

Actually, this development is months away from release. Goss engineers are still perfecting it, just as they have so many other innovations and improvements.

When announcement day dawns, be assured it will be ready to help make your operation better, faster or easier. You might consider Goss research engineers stubborn (our sales department sometimes gets impatient), but they won't give their stamp of approval until every torture test they can conceive has been administered.

The familiar developments listed below have helped these men earn the title of pioneers. What next from Goss? . . . we make no promises. Judging from the record, however, it will pay you to Keep Looking to Goss.

SOME "FIRSTS" FROM GOSS

Tension plate lockup . . . Continuous Ink Feed—now Micrometric Continuous Feed . . . finger-tip Colortrol—now master Colortrol Console . . . fully automatic Paster Pilot . . . Imperial 3:2 128-page folder (users getting up to 144 pages) . . . self-adjusting roller sockets . . . Sweep-Thru Fountains for quicker color change . . . Suburban® and Urbanite web-fed offset presses . . . Headliner® Mark I and Mark II . . . multi-color magazine presses now printing up to 2000 feet per minute . . . complete newspaper materials handling systems for reelroom, pressroom and mailroom.

3 out of 4 American daily newspapers are printed on Goss presses

THE GOSS COMPANY

CHICAGO 50, ILLINOIS

Specialists in newspaper, magazine and roto presses

A DIVISION OF MIEHLE-GOSS-DEXTER, INC.
The leader in graphic arts . . . engineering, service and manufacturing . . . industry-wide and world-wide

NAPL

Warned of Changes in Litho Industry

Plate demonstration at the Azoplate Corporation booth.

ADJUST to change or die! In our industry the door is wide open and we can, as perhaps few other industries can, *meet the challenge of change,"* stated J. Tom Morgan, NAPL president, in keynoting an event-filled 29th annual convention of the National Assn. of Photo-Lithographers held in late September at New York's Hotel Commodore.

Morgan set the mood for the convention with the aid of a dramatically presented color motion picture, *Meeting the Challenge of Change.*

More than 3500 lithographers and allied industry members attended the four day educational meeting. Included were sessions dealing with photography, litho technology and financial and sales aspects of operating a lithographic plant.

Approximately 125 manufacturers and equipment distributors occupied nearly 200 booths and exhibit spaces in presenting a well attended equipment show. Many exhibitors offered workshop demonstrations of new products in their booths. Displays of camera, platemaking and press equipment interested viewers up to 12 hrs. per day over a four day period.

Filmotype Sales Co. display attracts crowd.

A highlight of the convention was presentation of the first NAPL Soderstrom Award to Ralph D. Cole, president, Consolidated Lithographing Corp., Carle Place, N. Y., in recognition of his outstanding support of many education activities in the litho industry. William J. Stevens, NAPL executive vice president, made the presentation to Cole. The Soderstrom Award was created by the board of directors to perpetuate the name of Walter E. Soderstrom, recently retired after serving for 25 years as the association's executive vice president.

Morgan, president of Litho-Krome Co., Columbus, Ga., was re-

Top: S. G. Hall, Eastman Kodak Co., presents golden reel of new Eastman movie to NAPL's William Stevens. Bottom: P. Bleier, Quad Offset Corp., cuts a mask as B. Ulano, J. Wind and A. Ulano, Ulano Graphic Arts Supply Inc., observe.

Equipment show and educational meetings draw crowds to 29th NAPL Convention

By **RODNEY G. BROWER**, *Assistant Editor*

Above: Group watches Direct Reproduction Corp. plate demonstration. Left: Participating in awarding NAPL Soderstrom Award to Ralph D. Cole president, Consolidated Lithographing Corp., are (left to right) J. Tom Morgan, NAPL president; William J. Stevens, NAPL executive vice president; Cole, and Walter E. Soderstrom, NAPL consultant for whom the award was named.

Color key demonstration at 3M booth.

elected to a second term as NAPL president. Other officers reelected are: Milton Hudders, Recording and Statistical Corp., New York, vice president; William H. Glover, Sweeney Lithograph Co., Sub. of Federal Paper Board Co., Bogota, N. J., treasurer, and George G. Carnegie, Consolidated Lithographing Corp., Carle Place, N. Y., secretary.

Next year's convention will be held at Hotel Ambassador, Los Angeles, Sept. 19-22.

In his keynote address, Morgan declared: "We have one all-important, all-inclusive common purpose, that of achieving greater sales by providing more intelligent service. We must remind ourselves that intelligent service does not just happen. The development and successful application of effective technique is no accident. Efficient, workable and practical management, production and sales procedures must be planned.

"While change has always been with us," Morgan asserted, "the degree of change has been accelerated! . . . The challenge is to break away from the pattern of conformity so many follow today. There are available to us today, new techniques, improved materials and advanced equipment. . . . Let us benefit from the demonstrated results of research . . . Let us not, by default, be by-passed by what science has provided."

Morgan warned litho printers that they must reckon with changing currents of consumer demand typified by the significant increase of books by offset, which is ushering in web offset perfecting presses; with the changing patterns in packaging and the resulting trends to larger five and six color sheetfed presses, roll to sheet feeders, inline production, and automation, and with the changing nature of original color copy, which puts the industry within grasp of a more versatile photographic medium for color copy—the color negative transparency.

Charles W. Cook, vice president, Haynes Lithograph Co., Rockville, Md., discussed some of the challenges imposed on the litho industry by the current trend to web offset. Cook cited figures released by the Web Offset Section, Printing Industry of America, which showed that 28 web printing press units existed in 1946. Exactly 15 years later, in 1961, this figure had increased to 222 units.

Color Register Control

One of the major criticisms or problems concerning quality of printing by web offset, Cook said, is register control of four color process work carrying a repeat design in each color on the blanket to blanket press across the width of the web. "The problem facing blanket to blanket web offset is to control this kind of register from one extreme side of the web width to the other. This problem is accentuated and becomes worse in attempting to go from a small press to larger presses calling for 50 in. web widths," he added.

Cook continued: "If the trend toward color process printing on coated stock is to continue to grow, if we want increased participation in the profits available in the color printing market place . . . then we

must find a good answer to this problem of color register. At the same time we must have made available larger, faster and finer print quality web offset press machines."

One of the reasons attributed to the success of rotary letterpress in achieving color register is the fact it is possible to move and position color plates on the press cylinders to accommodate and allow for this web width paper stretch, Cook asserted. "If this be true, then we who are interested in web offset's future must find a way to overcome or neutralize this advantage."

Cook wondered if some method of plate lockup could be devised whereby split plates might be used and moved to accommodate the web paper stretch. Possible adaptions proposed were: A split cylinder that would allow half of the plate cylinder along with its half of the plate to be adjusted sideways while the press is in motion and the practicability of running two half size 25 in. webs in place of one large 50 in. web.

Equipment Leasing

In a paper dealing with leasing of equipment, Milton Hudders, vice president, Recording and Statistical Corp., New York, and NAPL vice president, reviewed types of leases and listed disadvantages and advantages of leasing this equipment.

"Tremendous expansion which is going on today combined with keen competition that is taking place in American industry has shown the need for new ways of financing this growth," Hudders commented. He also pointed out that leasing companies have had a phenomenal growth within the last 10 years.

Leasing is not the most economical way to finance the purchase of new equipment, he indicated, in that no equity in the equipment is built up by the termination time of the lease. "It is often stated that leasing of equipment frees capital for other purposes of the business. It is not the freeing of capital that is the important thing but whether the best use is made of cash that has been made available."

Miss Roll-O-Graphic was the attraction for, left to right, Joseph Leonard and William O'Grady, Underwriter Laboratories, New York, and George Goldie and Robert Goldie, both of Downing Mail Advertising Co., New York.

Several advantages mentioned in favor of leasing were: An opportunity to bid on jobs when available cash prevents purchase of new equipment necessary for such types of work; an answer to borrowing excessive funds and adding additional capital to the business, and serving as protection against obsolete equipment in that a new lease can be arranged on new equipment at the expiration of the original agreement.

How to Increase Profits

Knowledge of operating costs, workflow, efficient shop operations and economic purchasing of supplies were among some of the factors mentioned by Frank R. Turner, NAPL cost accountant, in his address on developing a profit or loss in litho plants.

"Purchasing provides a real opportunity for developing profits," he said. "Purchasing in economic quantities . . . can bring a real plus or minus into your operating picture." He urged that purchasing be cen-

Large Crowds Attracted to NAPL Convention Exhibits

(All names read left to right)

Left: Press controls are explained to George Hagopian, superintendent, Edwards Brothers Inc., Ann Arbor, Mich., by Wallace W. Dombrow, Crosfield Electronics. Center: Discussing new products on display at the convention are Donald Hemmer, stripper, and Edwin Nanheimer, pressroom superintendent, both of Case-Hoyt Corp., Rochester, N. Y.; Donald R. Spear, Graphic Reproduction Sales Div., Eastman Kodak Co., and Nick Amoroso, production manager, Case-Hoyt Corp. Right: At the Ansco exhibit, Frank Gibbs of that company shows technical literature to Ozzie Aslanian, plant superintendent, Circle Bridge Photoengraving Co., New York. The exhibits attracted hundreds of visitors.

The new Vulcamatic camera holds the interest of Thomas D. Clark, production manager, Seidel Farris Clark, Inc., Toledo, O., left, and Rudy Kiene, Vulcatone Corporation.

tralized within a plant for efficiency.

Determining definite procedures for various departmental shop operations will aid in improving the profit picture, Turner indicated. He felt that considerable stripping time might be saved by having goldenrod masking paper with cross rulings in blue ink printed up in advance as against having a stripper rule up every flat as an individual job. This should be helpful where a firm has the same kind of stripping volume. Unnecessary camera operations, periodic checks on waste and spoilage and making use of the right kind of plate which will yield the desired quality and length of run at the most economical cost, were other procedures mentioned.

"One of the biggest wasters of profits in some litho plants is that of conducting departmental operations on different floors. A poor plant layout . . . creates constant day by day loss," Turner stated. Inadequate working space also leads to profit loss, he added.

The necessity of receiving accurate cost information from shop personnel, with superintendents or foremen checking all time tickets, was another point advocated by Turner. However, "making bookkeepers out of your productive labor force really helps send up your percentage of nonchargeable time."

The speaker urged lithographers to have production standards built on their respective firm's performance. Estimators can more easily sell these time standards to the salesmen and through them, to the customer. "It is most important to periodically check the production time for every cost center against your estimating standards," he urged.

Three significant factors confronting lithographers, each requiring a new approach to the task of lithographing the photograph, were discussed by Charles B. Taylor, sales department, Litho-Krome Co., Columbus, Ga.

The trend of advertising photographers toward creation of original color photography in the form of 2¼ in. by 3¼ in. and 2¼ in. by 2¼ in. transparencies results in many problems in reproduction. The required and greatly enlarged reproduction of this copy is hampered by imperfections in the transparency, film grain magnification and loss of sharpness, detail and definition, Taylor outlined. He strongly urged lithographers to become a part of

continued on page 78

Phyllis Rae Kost operates the Model 610F VariTyper for Michael Reuna, VariTyper Corporation and James J. Gerovac and Walter Keiper, Du Pont.

Viewing Equipment Show at Recent NAPL Convention

(All names read left to right)

Left: Mel Mark, Durst USA, Inc., explains camera equipment to V. C. Collett, plant superintendent, and William S. McCartney, president, both of Regal Stationery Co., Toronto, Can. Center: Marathon roll film camera is behind Milton Hudders, vice president, Recording & Statistical Corp., New York; Robert Darcy, Chemco Photoproducts Co., and William J. McFarlin, vice president, Recording & Statistical Corp., Boston. Right: Jana Dail demonstrates Kimberly-Clark's litho plate wipes to Gene Kowal, co-owner, Nutmeg Printing Co., Hartford, Conn.; R. L. Mayotte, Kimberly-Clark Corp., Frank Kowal, Nutmeg Printing Co. Over 125 manufacturers and distributors exhibited products at the show.

An Exclusive PRINTING PRODUCTION Report

Printers Need Many Things

Chairman of the production session, Grant Herman (left), vice president manufacturing, Kable Printing Co., Mt. Morris, Ill., converses with speakers George Harper, general printing superintendent, Maclean-Hunter Publishing Co., Toronto, Can., and Howard Wampler, vice president engineering, Waverly Press, Baltimore.

Production session participants included, left to right: Don Krueger, secretary, W. A. Krueger Co., Milwaukee; Richard Long, production manager, American Book Co., Cincinnati; Ed Blank, Printing Industries of Metropolitan New York, Inc.; Gordon Ewing, vice president and general manager, Meredith Printing, Inc., Des Moines, and Daniel Heeter, president, Heeter Lithographing Co., Pittsburgh.

Commenting on the technical forum panel discussion, left to right, are Albert Radatz, vice president and production manager, Colwell Colour, Div. of Colwell Press, Inc., Minneapolis; B. William Dunn, Du Pont, and Dr. Marvin C. Rogers, executive director, Photoengravers Research Inc.

UTILIZING a theme of better production for better profits, a two day Production Institute concluded last month's Printing Industry of America convention by focusing attention on such topics as management, supervision, methods, planning and controls. A production session and day-long technical forum were included.

The production unit is the creative unit of a printing plant, said O. R. Sperry, senior vice president, R. R. Donnelley & Sons Co., Chicago. It produces the only tangible evidence of a good sales unit and will determine profit or loss of a company.

Sperry emphasized the importance of following a systematic procedure in production management. Production control procedures are designed to keep a plant out of trouble, he said, and warned not to deviate from such procedures until better ways are devised to produce the printed product.

No Unimportant People in Plants

"There are no unimportant people in a well managed printing plant," he added. Teamwork and people can make or break the production manager in his day to day work and careless handling can ruin the finished printed product, Sperry indicated.

A production manager must be cost and profit minded and must represent the best interests of the customer. He should only be interested in ways and means to deliver a job in spite of difficulties and/or procedures. A prime requisite of a production manager is his ability to make the correct decisions and on time, Sperry concluded.

George Harper, general printing superintendent, Maclean-Hunter Publishing Co., Toronto, Can., covered the role of the supervisor in motivating workers and the importance of good supervision to accomplish efficient and economical production.

Harper stated: "In a period of rising production when the over-all volume of business available to all firms is increasing, those firms with the highest productivity records will be in the best position to get more of this new work, to produce it at lower cost and thus obtain a higher rate of profit.

"In most printing plants, output per man hour is the key to higher productivity. This output is a combination of worker effort . . . management know-how and leadership . . . the amount of new capital invested in plant

By RODNEY G. BROWER, *Assistant Editor*

For Better Production

PIA convention speakers report on techniques for improving output

and equipment and how wisely it is spent . . . the extent to which automation can be built into working methods . . . plus sound, strong supervision."

Harper rated the willingness to work hard high on his list of production supervisory abilities. In response to a question from the audience other qualities listed by Harper were: The ability and drive to complete projects; ability of a supervisor to pull his department along with him; finding the root of trouble, appraising the situation and getting it under control, and quality consciousness.

He also indicated that superintendents should assist foremen in considering new methods of work production. Many foremen resent suggestions, either from management or from their own men. It is the superintendent's job in talking to foremen to point up the problems, insist that they recognize the need for change or improvement and then do everything possible to help in finding the answers, giving the credit to the foremen if at all possible.

"The good foreman does not work with things like machines, but with people," Harper commented. "He is the link between workers and management, holding the highest position within the ranks of the workers while standing on the first step of the management ladder."

Adequate Supervisory Salaries

Harper felt that pay was the best incentive to increase productivity provided that pay levels were flexible to suit varying conditions. Foremen's salaries should be adequate to: (1) Offer enough incentive to keep foremen improving themselves; (2) be in line with other foremen in the plant and with similar foremen in other plants in the area, and (3) provide the foreman with a yearly income in excess of that being earned by subordinate workers.

Harper concluded: "We are all facing a period of change along lines that will be new to many of us—tape operation, electronic controls, magnetics, hydraulics, the tremendous impact of the camera in typesetting and copy preparation. The important thing to realize is that supervisors and managers will decide, in the long run, which of these new things is good and which are bad. We will only do this well if we keep an open mind, study these things critically but analytically, accept only the best of them and adapt them to our own plants."

Methods improvement should be considered as "a way of life and not just a two week proposition," Gordon R. Ewing, vice president and general manager, Meredith Printing, Inc., Des Moines, Ia., commented in his talk on better methods. All methods improvement requires additional effort to make it effective as well as the wholehearted support of plant workers, he said.

Ewing outlined several steps for installing methods improvement into a line organization. First, the deep desire for improvement must be created within the employees in conjunction with installing goals within the workers. Responsibility for methods improvement should be placed with line supervision and Ewing urged that production operations be segregated from non-productive operations within the plant. He cautioned against cramming through specific methods improvements without the approval and support of employees who will put these methods into effect. Work-

continued on page 76

Among those attending the PIA Production Institute sessions, left to right, are: Bill Graham, production manager, Harrison & Smith Printing Co.; Verne Myring, production manager, Holden Printing Co., Minneapolis; Ed Hill, PIA technical director; William Heintzinger, composing room foreman, Davis Needham, legal production supervisor and Robert Edelman, offset preparatory superintendent, all of Herbick & Held Printing Co., Pittsburgh; Mrs. Sarah Sendor; Mortimer Sendor, secretary-treasurer, Sendor Bindery, New York; George Ranscher, vice president of production, Bradford-Robinson Printing Co., Denver, and Charles Shapiro, technical director, Hopper Paper Co., Taylorville, Ill.

Packaging Field Given Device For Recording Handling of Containers

A recording instrument developed at the Leatherhead, England, laboratories of Printing, Packaging and Allied Trade Research Assn., gives a complete drop by drop record of a container's journey.

Under development for the packaging field for two years, the PATRA Drop Recorder is claimed to note every drop received, tell the drop height, the side on which it fell and the time and date of each impact. If the container is stored in a warehouse, the instrument will indicate on which side it stood and for how long.

The PATRA Drop Recorder is the successor of the original PATRA Journey Shock Recorder which counts the number of drops and indicates drop heights, but which does not record the impact time and date.

The new instrument records in the range of 3 to 36 in., whereas the old one graded drops between preset limits. It operates for more than a month and the time for any drop or movement can be determined from the wax paper record which is produced within ± 10 min.

Pens Trace on Wax Web

A waxed paper web is driven at a constant speed by a clockwork motor. Three pens, deflected from the normal position by the impacts, make traces on the web; the amount of deflection being a measure of the drop height. A fourth pen marks the time base in hourly divisions. On each impact the paper is accelerated and overrides the clockwork drive.

After the clockwork mechanism runs down, or stops for any reason, the instrument will still continue to record drops until the web is exhausted.

To facilitate interpretation of the traces, a precision reader is used with the recorder. The operator unwinds the web through the reader and by manipulating an adjustable scale, deflection measurements are read. From these a picture of the treatment the package received during transport and storage can be obtained.

The recorder is packed in Volaprene cushioning material when it is sent out on a journey. This makes operation of the instrument independent of the nature of the surface on which the container falls.

Tour Goss Plant—Ing. Horacio Scheck (left), production manager of *El Pais*, Montevideo, Uruguay, and A. J. Krohn (right), vice president, Goss International, are pictured during a recent tour of the Goss Company plant in Chicago. *El Pais*, a morning daily of 60,000 circulation, is expanding its ROP color facilities with an additional press unit and other equipment.

Linofilm Photocomp System Applied To Russian Translating Computer

The Linofilm photocomposition system is now being used to automatically convert output from an experimental Russian translating computer into reproducible English text, according to an announcement from Mergenthaler Linotype Co.

Until recently the output of the translator was printed on an electric typewriter. The printed material produced in this manner was not of a typographic quality satisfactory for the wide circulation intended and it was necessary to completely recompose the material prior to distribution. Substituting a Linofilm photo unit for the electric typewriter results in a printout on film or paper suitable for reproduction by offset or letterpress printing.

In this system, the manually operated keyboard used in a conventional Linofilm installation is not required as the computer produces the necessary signals to control the photo unit. Output of the computer is on tape which contains coding specifying upper or lower case characters, character widths, type face and size, punctuations, line length, spacing and information for justifying lines and centering heads.

Principles proved out on this installation can be applied to any application where it is desired to make a quality printout of information, the company states. However, the object is not quality for its own sake, but quality for the sake of economies resulting from getting usable copy directly.

High speed computer translation of foreign language material is essential in order to cope with the volume of such data which must be reproduced as English language text.

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Plans for a Central Institute of Printing Technology in India have been formulated by the Applied Art Board of the All-India Council for Technical Education and members of the printing industry. The Institute will be designed for the training of supervisory and managerial staff in the printing industry along modern lines.

Go ahead. The typing is for real.

ERASE ON THIS NEW CHAMPION® BOND

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Go ahead. The typing is for real.

ERASE ON THIS NEW CHAMPION® BOND

This is 20 lb. Champion Bond

Officers of the New England Newspaper Mechanical Conference elected last month are, left to right: Walter C. Crighton, retired, New London (Conn.) *Day*, secretary-treasurer; Frederick L. Johnson, composing superintendent, New Haven (Conn.) *Register*, immediate past president; Carleton A. Braga, mechanical superintendent, Woonsocket (R.I.) *Call*, president; William Weinrich, mechanical superintendent, Worcester (Mass.) *Telegram-Gazette*, vice president, and George F. Harris, Nashua (N.H.) *Telegraph*, program chairman.

New England Conference composing room speakers' panel consisted of, left to right: William D. Rinehart, director, Mechanical and Service Div., ANPA Research Institute; Henry Lajoie, Jr., composing superintendent, Fitchburg (Mass.) *Sentinel*; Roland V. Maloney, composing superintendent, Providence (R.I.) *Journal-Bulletin*; Thomas Elliott, Jr., composing room superintendent, New London (Conn.) *Day*; Allan M. Woods, production manager, Garden City (N.Y.) *Newsday*. Over 600 registered for the one day conference.

Near Future Use of Offset Not Likely for Big Daily

SPEAKING before the New England Newspaper Mechanical Conference held in Boston last month, William D. Rinehart said: "We at the ANPA Research Institute can't see anything in offset's near future that will cause a metropolitan daily newspaper to abandon its present hot metal letterpress operation." Rinehart is director of the Mechanical and Service division of the American Newspaper Publishers Assn.

Other comments by Rinehart regarding the printing of daily newspapers by the offset process included: "The major production cost of any large or small newspaper, other than for newsprint, is the composition cost. At the present time there is nothing in the picture for metropolitan dailies that would make it probable there would be a saving in cost to merit abandonment of their existing operations."

Continuing his progress report regarding technical and processing improvements for offset printed newspapers, the speaker reported that the processing of a plate after it has gone through the burning-in stage takes an average of about 15 min. "At the present time," he said, "this is a factor to be taken into consideration by publishers considering offset. In most existing offset-printed dailies this is not so important but it could be on a newspaper that replates for several editions or late news.

"In the area of offset platemaking there is much development work. . . . Several organizations are working on equipment that will make it possible for an offset newspaper to produce a plate at high speed from pasteup copy ready for the press.

"Until just recently, offset newspapers used one plate per press cylinder—that is, each plate was two pages in size. If a correction was to be made, or perhaps a ball game score to be added, it was necessary to replate the entire two-page press cylinder. . . . It seems logical that the trend will be toward a plate per page to cut the cost of corrections and replating."

Experiences with Offset

Referring to the statements of three offset printed daily newspaper publishers in attendance at the June ANPA Production Conference in Chicago, Rinehart said all three were using standard 32 lb. newsprint and reported they had experienced no difficulties with newsprint waste. After the pressmen acquired the feel of the press the percentage waste was no higher than that experienced by most letterpress newspapers of comparable size.

Speaking about offset inks, Rinehart reported: "At the present time, offset inks are much higher in cost than letterpress inks. The blacks run from 44¢ to 70¢ per lb.

"One of the offset publishers reported that his ink cost was 8¢ per lb. per 1000 standard format pages. Another publisher reported ink cost as 12¢ per 1000 standard pages, the ink costing 69¢ per lb. This would be the equivalent of 5700 standard average pages per pound of ink. . . . the mileage from offset inks is only slightly higher than the usual mileage obtained from standard letterpress black newspaper ink, while the per pound cost is considerably higher.

"On a newspaper of small circulation ink cost is not a major concern since the consumption is so low. However, in large circulations, offset inks could become a costly item. With the growth of offset, undoubtedly the ink manufacturers will be able to cut the per pound cost with mass production.

"Another important factor regarding offset which is still more or less not resolved," Rinehart said, "is the need for driers. All daily papers now are running on offset at comparatively slow speeds of 600 f.p.m. or less and are not using driers." ⊕

Research Booming Throughout U.S.

The United States is rapidly becoming one big research laboratory, according to Dr. C. Stark Draper, department head, Massachusetts Institute of Technology, Cambridge, Mass. In a recent statement, he declared that there is more research being done in the U.S. today than ever and that the rate of research increase is "fantastic."

Draper emphasized that most research is being done through private facilities even though government research has received most of the publicity. One problem he forecasted for the future is in the area of developing both scientists who have the narrow and deep knowledge necessary for extending knowledge without thought of practical application and those with reasonably deep knowledge but who have a broad outlook and grasp of the entire field of engineering.

To Explore Ink Drying Method—An experimental program to test a new radiant heating method for rapid drying of inks in high speed printing has been announced by Hupp Corporation. Known as the Smitherm process, the method will be tested on presses at the research and development laboratories of Time, Incorporated, Springdale, Conn.

Experiments with Indirect Web Letterpress—The Miehle Company, Div. of Miehle-Goss-Dexter, Inc., recently demonstrated the results of experiments in indirect web letterpress on a two unit Miehle web offset press at Rayner Lithographing Co., Chicago. The demonstrations, using Dycril plates, were prompted by a rising interest in the potential advantages of this process. G. W. Bassett, Miehle sales vice president, stated that although the experiments were not conclusive, development of indirect web letterpress looks promising and will continue to be an importana part of Miehle's research and development group.

Two Join ANPA-RI Research Staff—Lloyd Foss and Erwin Jaffee have recently joined the staff of the Research Center of the American Newspaper Publishers Assn. Research Institute, Easton, Pa. Foss will head the newsprint quality control program. He was previously a mechanical engineer at Ingersoll-Rand. Jaffee was formerly associated with the Missile Division, Chrysler Corporation. He has had broad experience in color photography, lithography and printing production as well as in teaching programs in these fields.

Two Promoted at Ink Institute—William D. Schaeffer and Miss Jacqueline M. Fetsko have been promoted to the respective positions of associate research director and assistant research director of the National Printing Ink Institute, Lehigh University, Bethlehem, Pa. The appointments were announced by Dr. Albert C. Zettlemoyer, research director.

LTF Receives Robertson Camera—Leonard S. Florsheim, Jr. (left), president of Robertson Photo-mechanix, Inc., shakes hands with Michael H. Bruno, research director of Lithographic Technical Foundation, as a Robertson camera is presented to LTF.

LTF Recruits 1000th Member—Danner Press of Canton, Inc., Canton, O., recently became the 1000th member of the Lithographic Technical Foundation. The Canton firm is known as a pioneer in the web offset field. LTF Director William H. Webber stated that this milestone in membership presages a new era of achievement in lithographic research and technical education.

Printing Research Institute Report—A report on the Fifth International Conference of Printing Research Institutes is now available in book form. Entitled *Advances in Printing Science and Technology—Vol. I, Printing Inks and Color,* the 352 page volume contains 29 technical papers and discussions. Chapter headings include: "Influence of Inks, Paper and Press on Color"; "Chemistry and Physics of Lithography" and "Ink Colorants." The book may be obtained from Pergamon Press, 122 E. 55th St., New York 22, N.Y. Price is $12.50.

PATRA Develops Board Crease Tester—A board crease tester for use by converters, merchants and mills has been developed at the Printing Packaging and Allied Trades Research Assn. laboratories in England. The instrument makes controlled creases in sample boards under normal production conditions. Settings on the tester enable depth of impression by the creasing rule and creasing groove width to be varied to micrometer fine limits.

SPPA Opens Technical Information Center—The Technical Information Center of the Screen Process Printing Assn., International, is now in full operation. The center, located at 465 Milwaukee Ave., Chicago, was formed to help apply the latest research and production advances to specific problems in the industry, according to Robert H. Blundred, SPPA executive secretary.

The center is designed to provide two types of service, answering individual technical problems, and pooling and publishing the latest research findings on problems of industry wide concern.

For more information circle 42 on Reader Service Card →

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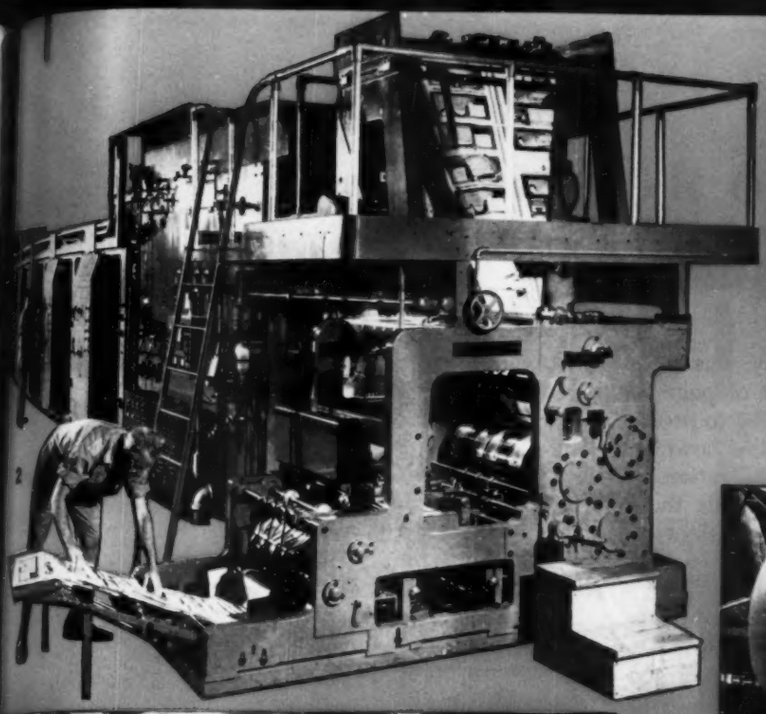

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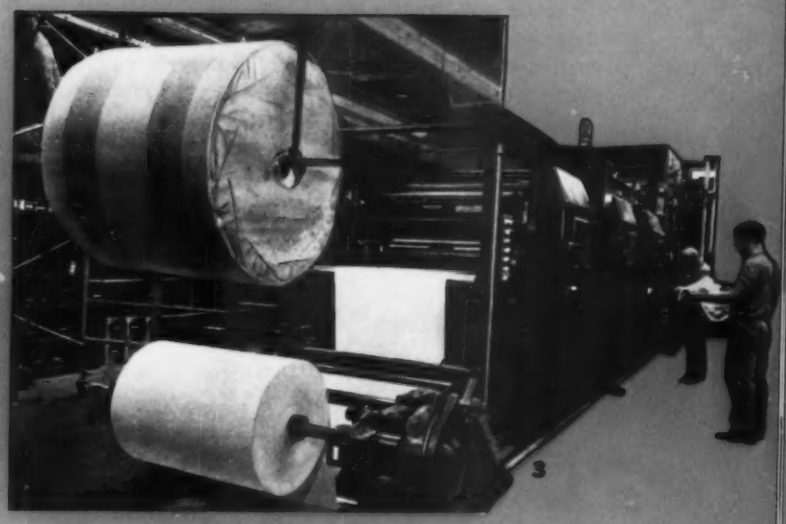

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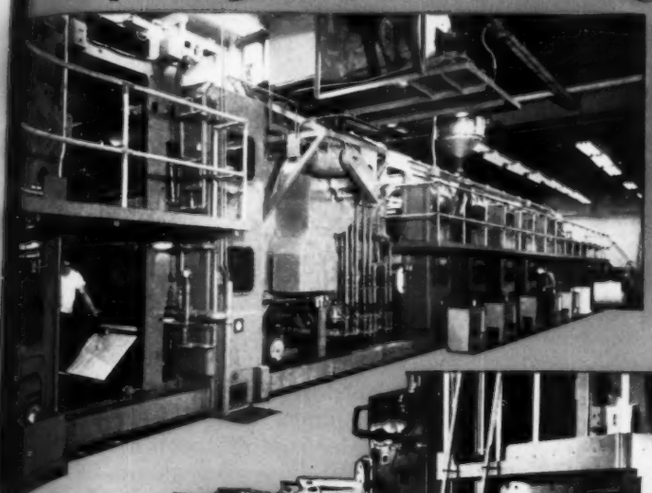

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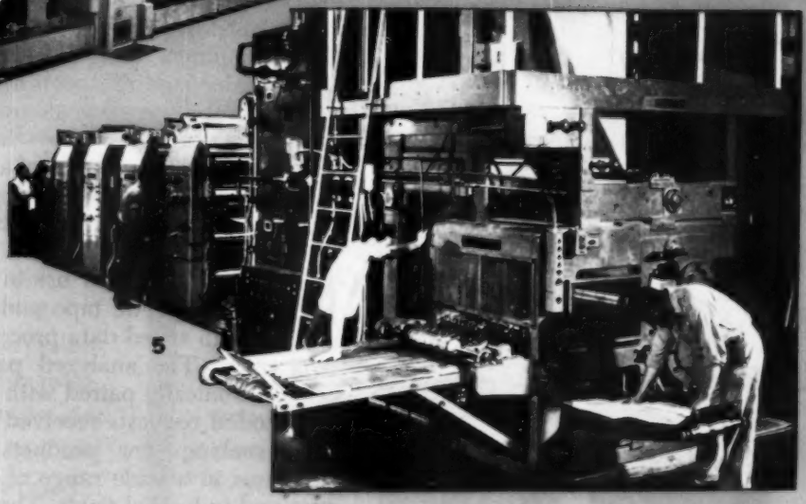

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1	Western Printing & Lithographing, Poughkeepsie, N. Y.
2	Eastern Colortype, Clifton, N. J.
3	National Publishing, Washington, D. C.
4	Safran Printing, Detroit, Mich.
5	Majestic Press, Philadelphia, Pa.

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Challenges ITCA to Regain Control of Typography

THE 1962 convention program of the International Typographic Composition Assn. included a challenge by Alexander S. Lawson to typesetters to regain control of design, a suggestion that typesetters extend their interests to film and plates by Wilson S. Yerger, and an assertion by Frank Dewitt that tape operation is changing typesetting technology. The convention, held last month in Montreal, Can., was attended by 220 persons.

Alexander S. Lawson, professor of printing at Rochester Institute of Technology, expressed his ideas on the attitudes of typesetters to typography, and the direction in which typography seems to be headed.

Loss of Attitude

Lawson said he feared that the great days of American typography, that period building on the foundations of William Morris, have gone. The old typographers represented an attitude, and that is what is being lost at the present. It is that of our own businesses in terms of the acceptance of the product of our plant. Typesetters have gradually lost the initiative to decide what is happening to this matter of design. As a result of this loss of control, Lawson said that a significant problem for typesetters is how composing room trainees can learn if they are always subjected to an exact layout by the customer.

The RIT professor challenged the typesetting industry to regain its rightful influence over typographic design. It was suggested that private press operation, the ability to view final results of typesetting efforts, and the wealth of printed material on the subject might serve to assist the interested apprentice and help regain the loss of design control.

Extension of Interests

In another convention address, Wilson S. Yerger, vice president of Graphic Products, Imperial Type Metal Co., spoke on the typographic composition industry's interest in film and plates.

Yerger said that until recent years typography was primarily the arrangement of page forms preparatory to going to press with the type metal. Today, however, with the expanding utilization of film, the typographer finds that the metal is staying in his plant rather than getting outside. Recently an ever-increasing portion of the final product has been reproduction proofs, which must be transformed into either negatives or positives. Yerger stated that it would be a logical extension of typographic industry services to include this conversion.

Frank DeWitt, Graphic Arts research director of Friden, Inc., noted that an important change in typesetting technology is the expanding use of tape operation.

All the new typesetting machines (with two exceptions) are either built for tape operation or can be adapted for tape operation. DeWitt cited a number of examples of changes accomplished through the utilization of tape. He also expressed the opinion that the six channel tape now being used for automatic typesetting is not suited to the composition produced by the typographic-composition industry. DeWitt proposed that ITCA use its collective experience and judgment to guide and sometimes discourage equipment manufacturers in order to have the kind of equipment produced that is needed.

WOLF

BAUMWELL

GORE

CANFIELD

The following ITCA officers were elected by the convention members: Henry J. Wolf, president of Service Typographers, Inc., Chicago, president; M. J. Baumwell of M. J. Baumwell, Typography, New York City, first vice president; Byron Gore, president of Trinity Typesetters, Inc., second vice president, and Donald M. Canfield, Utica Typesetting Co., Utica, N. Y., treasurer. Clarence E. Harlowe is the former ITCA president.

Computers Find Patent Buyers

Multi-million dollar computing machines now make it possible for both private and corporate inventors of patented new products and processes to find prospective buyers and licensees quickly. This is due to the functioning of an international pool of patents by the Institute for New Products, Inc., located at Ardsley-on-the-Hudson, N. Y.

The Institute uses electronic computer equipment to bring the inventor and interested prospects together. Key to the service is an analysis of the inventor's patent by the Institute and the preparation of a coded profile of its characteristics potentially embracing as many as 40,000 variable factors.

Data is prepared for use in sorting cards, magnetic tape and ultimately, high speed data processing equipment. The analyzed patents are electronically paired with similarly coded requests received from firms seeking new products and processes in a wide range of business and industrial fields. They are matched up and introduced and the Institute withdraws from negotiations at this point.

Hoe Emergency Service

The New York City Repair Service of R. Hoe & Co., Inc., now has an emergency division home telephone listing. The phone number is on a card for customers, to give them 24 hour contact with the press maker. The New York works has facilities for day and night service, and a supply of spare parts.

For more information circle 102 on Reader Service Card →

ipi

SPEED KING
LITHO JET H.T. BLACK

is of the highest quality—has excellent fountain flow, resists greasing and prints sharp, clean and dense. Sets extremely fast and dries quickly on coated stock—slightly slower on regular offset. Good rub and scratch resistance.

SPEED KING
LITHO GEM BLACK

sets extremely fast on coated paper and slightly slower on regular offset stocks—has good working qualities and is excellent for process work. Prints dense with good gloss; contains drier and cannot be left on the press overnight.

SPEED KING
LITHO JOB BLACK

is an economical, moderately toned black with good press stability. Especially recommended for absorptive stocks, but can be used on coated stocks if very quick dry and high rub resistance are not required.

SPEED KING
LP HALFTONE BLACK

contains drier and should not be left on the press overnight. It sets and dries very fast with good gloss on enamel, coated and absorbent stocks, and performs well on some machine coated papers. For all top-quality letterpress work.

SPEED KING
LP JOB BLACK

has a regular job press body and can be left on the press overnight because it contains no drier. It sets and dries quickly and is recommended for general letterpress shop use on enamel, coated and absorbent stocks.

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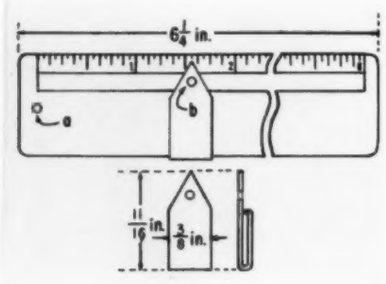
CORPORATION DIVISION

EXECUTIVE OFFICES: 67 WEST 44th STREET, NEW YORK 36, N. Y.

TOOL FOR CIRCLES, CURVES

I have made a simple instrument for scribing or drawing circles and/or curves. It may be used in laying out work on metal or plastic, or for drawing curves or circles on display pasteups for plate reproduction.

The tool can be made from 0.025 in. or 0.040 in. thick metal. It is 6¼ in. wide by 1 in. high. The ⅛ in. slot



is cut for a width of 6 in. in the graduated face of the rule.

A sliding pointer is made from steel and fashioned to dimensions shown in the diagram. Provision should be made for a small lip to ride along the bottom edge of the ⅛ in. slot. There should be enough tension in the clamp part to hold the pointer snugly.

A small diameter twist drill is used to drill holes at *a* and *b*. A sharp instrument is inserted in hole *a* to serve as the axis when a black ball point pen is inserted through hole *b* in the adjustable pointer.—*Pat Wilson, The State Record Co., Columbia, S. C.*

CHECKING FOR HICKIES

When hickies persist after all the usual causes have been removed, check the coppered rollers. If all of the composition rollers are clean and free of cracks, and the entire press including roller ends has been carefully cleaned, try the following:

Wash up press clean and dry the rollers. Let press idle for 5 min. Stop press and examine rollers for flakes of copper. If any pinpoint flakes of copper can be found, it may be the source of the trouble. To develop further evidence, clean all copper rollers and paint them with a good lacquer. If the incidence of hickies materially lessens with the lacquered vibrators, it indicates copper is causing the trouble. — *Courtesy* Lithographic Division Bulletin, *Printing Industries of Metropolitan New York, Inc.*

IMPROVED BLACK PRINTING

Add Reflex blue or a strong blue toner to your offset black inks to obtain a more dense black print.—*Martin E. Odell, Anderson, Ind.*

SQUARING PAGES IN FORM

A pressman can enlist the aid of the compositor when it comes to squaring up pages. He can have the compositor make up the pages with a 1 or 2 pt. rule at the top or bottom of half pages to enable him to check the register. The rule can be broken off so that only a pica or two will print. Then when the press is ready to roll, the pressman can break off the pica segment of the rule with tweezers. — *Richard J. Fastner, St. Paul, Minn.*

CLEANING MACHINE FRAMES

Most printing department supervisors like to keep frame work on machines clean at all times. This is especially true in the case of presses the frames of which are finished in safety colors.

A number of different kinds of cleaning agents are used to remove accumulated grease, oil and dirt. Among other detergents being used for this purpose, the pressroom foreman in a Chicago printing plant reports that a good job of eliminating the unsightly accumulations can be done with Mr. Clean. Just use according to general directions on the container bottle.—*Ward K. Schori, Evanston, Ill.*

AID TO PLATE GUMMING

As we know, lithographic plates should be gummed up smoothly and the gum dried quickly. We keep a small, portable hair drier plugged into a receptacle near the press for that purpose.—*Martin E. Odell, Anderson, Ind.*

Improving Spread-Type Quality

Often it is necessary to produce a spread-type positive from a negative to insure register or to provide a slight overlap in multicolor printing of line or type matter. Producing the degree of spread required without losing image sharpness or distorting shape has long been a difficult problem. But recently a method of improving the quality of spread-type—or "fatties" as they are often called—has been developed and is being used with good success in the immediate Chicago area.

Improved quality of spread-type is demonstrated by comparing original negative character with "fatty" produced under white light and one produced with black light and Cronar Ortho M spacer sheet.

Procedure is simple and straight forward. The light source used for exposure is a 250 W. General Electric Purple X-250 bulb, available through all G-E lamp dealers. This is a light restricted to the near ultraviolet and deep red and sometimes referred to as black light.

With the light positioned about 6 ft. from the vacuum frame, exposure time is from 30 sec. to 2 min., depending on the degree of spread required. It is not necessary or even desirable to move the light back and forth or in circles, as is frequently the practice when white light sources are used to produce "fatties." ("Skinnies"—or the reverse of

spread-type—can be made using this same system, but exposing from a positive instead of from a negative.)

In making the exposure, use a spacer sheet of fixed out Du Pont Cronar Ortho M Litho Film (0.004 in.) between the negative and the unexposed film. Ortho M features special surfaces that eliminate Newton's rings and air bells on drawdown, assuring good contact. Its use is important, for other types of spacer films have sometimes been found to cause undue distortion and/or smears between letters.

Recommended developing time is about 3 min. for Cronar Ortho M Film and about 2¾ min. for Ortho A.

Altogether the major advantage of using this combination of black light and Cronar Ortho M spacer sheet is that the line of type image is spread proportionately in all directions, with corners held sharp, and with fog or smear between letters reduced to a minimum or—in most instances—absent entirely. —*Mike Connely, in* The Graphic Arts Register, *published by E. I. du Pont de Nemours & Co.*

BETTER THAN SANDPAPER

When hand feeding short runs of small stock with a rule or type close to the bottom, it's difficult not to leave a smudge when removing the printed sheet after the impression has been made. Simply take a pair of tweezers in the left hand, and slide one prong under the sheet as the platen starts back. With a little practice you'll find that this beats the usual sandpaper used over the fingers.—*Frank M. Frye, Frye Printing Co., Tipton, Mo. Courtesy Kimberly-Clark Corp.*

For the Reader

A chance to be paid for ideas which have netted savings in time, money and effort in your printing plant is offered readers of *Printing Production*. If your idea is accepted for publication it will be printed in the Idea File, a regular *Printing Production* feature, and a check will be mailed to you.

Send as many as you wish to: Idea File Editor, *Printing Production*, 1276 W. 3rd St., Cleveland 13, O.

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*SPEED STEREO PRODUCTION...
added savings in time and labor for casting, mat drying, plate mortising!

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For efficient, continuous casting, faster cooling, superior pit-free surfaces. Features 1000 lb. gas or electrically heated metal pot, optional water cooled top platen and/or vacuum equipped bottom platen. Truly superior—both in design and performance!

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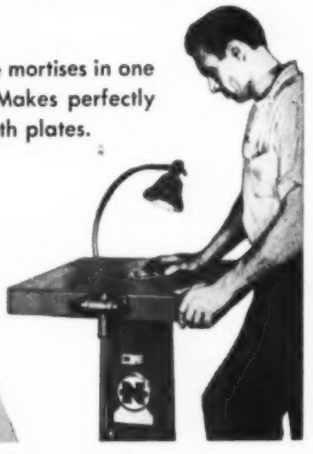
Permits quick, thorough drying, perfectly flattened mats every time! Uniform heat distribution over entire drying surface from single point control. "Floating" cover feature for pre-shrinking mats.

NOLAN MORTISER

Drills, outlines, cuts inside mortises in one quick, easy operation! Makes perfectly vertical cuts, clean, smooth plates.



WRITE TODAY for full information on these quality NOLAN products.

NOLAN Corporation
ROME, N. Y.

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Left: 6 black & white units, 1 4-color unit, 2 color plate cylinders, double folder. For Worcester, Mass. *Telegram-Gazette.*

Center: 6 black & white units, single folder, color plate cylinder; substructure in background; designed & built for Paterson, N. J. *Evening News.*

Right: 2 black & white multi-units with color plate cylinder; additional Scott equipment for Jackson, Mich. *Citizen-Patriot.*

Three High-Speed Presses In SCOTT Erection Bay

Quality workmanship plus a modern plant, equipped to build newspaper presses designed to meet today's need for high-speed, economical production; complete with all facilities for spot and multi-color printing.

Let a SCOTT engineer help you solve any pressroom problem involving the printing of better-looking newspapers.

SCOTT presses **WALTER SCOTT & CO.**

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McNellen Picked To Head IAE&S

Charles H. McNellen, president of the Bomac Electrotype Co. of Toronto, Can., was elected association president for the coming year when 214 members of the International Assn. of Electrotypers and Stereotypers convened in Washington, D. C., in early October.

McNELLEN

Other officers selected were: Walter T. Flower, Flower Steel Electrotype Co., New York City, first vice president; Charles H. Rodd, Rodd Electrotype Co., Boston, second vice president, and Glenn D. Heck, Art Electrotype Co., Cleveland, third vice president. Floyd C. Larson of Cleveland continues as executive secretary.

"Why not letterpress?" A. A. Polscher, production manager of the Detroit Office of McCann-Erickson, Inc., queried the IAE&S members. He listed the following five letterpress features which can be emphasized to buyers: (1) You have decided economies on jobs requiring stops for split quantities or when type or plates must be changed. (2) You can make attractive bids for jobs of only a few pages from color plates. (3) You have flexibility when there's likelihood of changes up to or after start-up time. (4) You can make moves independently, and the benefits are better register and flexibility. (5) You have better makeready control to achieve a maximum of ink distribution on solids and highlights, with sharper print of the dots.

Polscher also asked, "Why aren't you telling the impressive story that letterpress today isn't the same as yesterday?" He mentioned such advances as powderless etching, pressure casting and laminated plates.

Announcement of next year's meetings was made as follows: Annual Spring Technical Conference & Exhibition, April 2-4, Statler Hilton Hotel, Detroit, and the annual convention, Oct. 1-4, Mark Hopkins Hotel, San Francisco.

Dr. Harry E. Crawford, supervisor of Du Pont's printing plate laboratory in Philadelphia, inspects five of the six types of photopolymer printing plates which will be produced in the Parlin, N. J., plant.

Du Pont Opens Plant for Dycril Plate Production

The start-up of a full-scale plant in Parlin, N. J., to produce Dycril printing plates by a new process was announced by Paul H. Smith, manager of printing plate sales for Du Pont's Photo Products Dept. Previous production had been on a pilot basis. Smith spoke at a press conference during the Printing Industry of America's convention held last month in Pittsburgh.

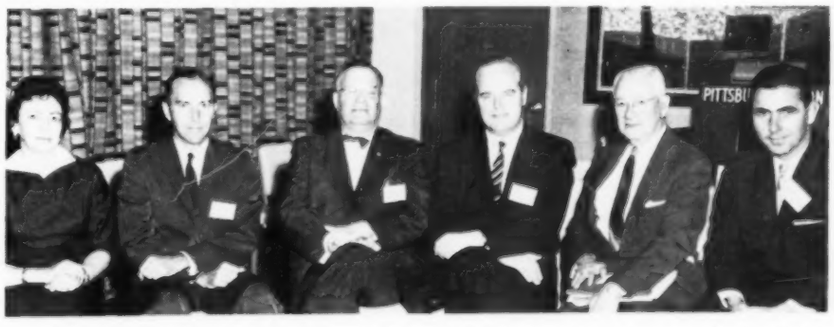
Smith said the new manufacturing process has made it possible to reduce prices for the plates an average of 17%. The price of the Type 30 thin flexible plate was reduced 31% and the Type 152 flat plate reduced 18%. Du Pont's new commercial plant will manufacture six different types of the photosensitive letterpress plates in sizes up to 40½ in. by 76 in.

The improved photopolymer composition cuts down exposure time from the present average of 7 min. to about 2½ min., Smith reported. The flexible plates have a thickness tolerance of ± 0.0005 in., and rigid plates, ± 0.001 in. Smith also announced the introduction of a new thin plate, Type 25, with a relief thickness of 0.011 in., designed for use as a wrap-around plate in rotary direct letterpress printing or for dry offset printing. Three companies now manufacture the special equipment needed to process Dycril plates.

3M Negotiates For Acquisition of Di-Noc

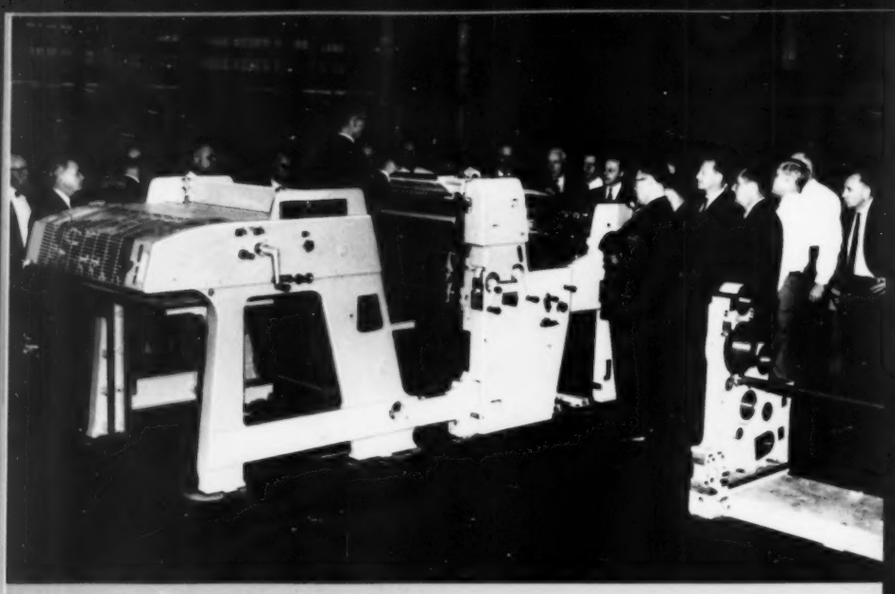
Minnesota Mining and Mfg. Co. and Di-Noc Chemical Arts, Inc., are negotiating for the acquisition of Di-Noc by 3M, subject to approval by Di-Noc's stockholders. The announcement was made by Herbert P. Buetow, 3M president, and Edwin A. Sweet, Di-Noc president and treasurer.

Preliminary agreement has been reached on the basis of exchanging one share of Di-Noc for eight-tenths of a share of 3M stock. Buetow said that if the transaction is consumated, the Di-Noc organization will continue intact, with Sweet continuing as chief operating official. Di-Noc's headquarters and main plant are in Cleveland and a new photographic film plant is presently starting operation in Honeoye, N. Y., about 35 miles south of Rochester.

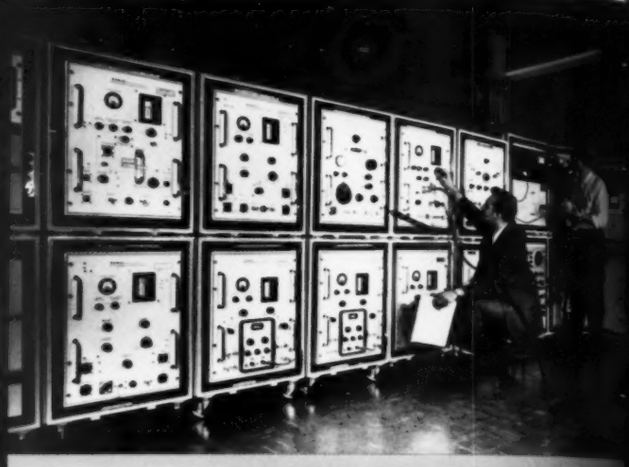


Equipment Manufacturers Name Officers—Problems of concern to the printing equipment manufacturing field were dealt with last month by the National Printing Equipment Assn., meeting in Pittsburgh. Officers for the 1961-62 year are, left to right: Rhoda Steiner, assistant secretary; George C. Houck, Harris-Seybold Co., treasurer; Lee Augustine, Printing Machinery Co., president; Joseph A. Keller, Mergenthaler Linotype Co., vice president; Harry L. Gage, educational advisor, and William G. O'Donnell, secretary.

What's going on at...

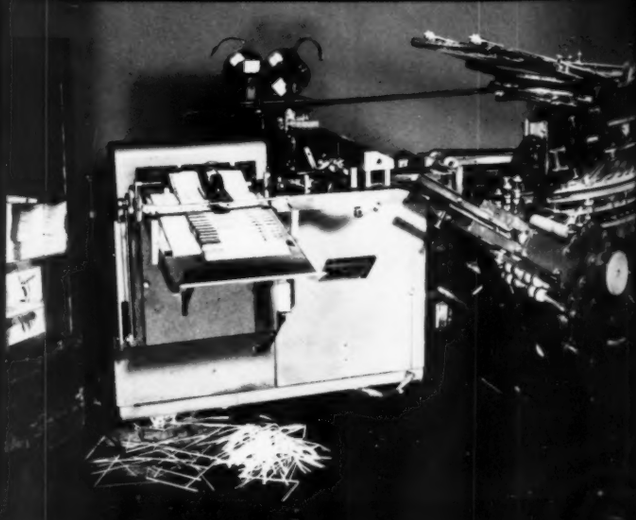


NEW HARRIS 25 x 38" SINGLE-COLOR offset press gets "preview" inspection by district managers at Harris-Seybold's Dayton plant. Companion to the sales-record-breaking Harris 25 x 38" two-color, the new single-color press incorporates all the outstanding features that have received such enthusiastic acceptance by lithographers throughout the country.



THIS COMPLETE "MOBILE MICROWAVE LABORATORY" consists of 20 box-like instrument packages installed in a motorized van. They are manufactured by Harris-Intertype's subsidiary, PRD Electronics, Inc., for the Frankford Arsenal, Army Ordnance Corps. These microwave calibration units are designed for testing check-out and guidance systems at world-wide Army missile sites.

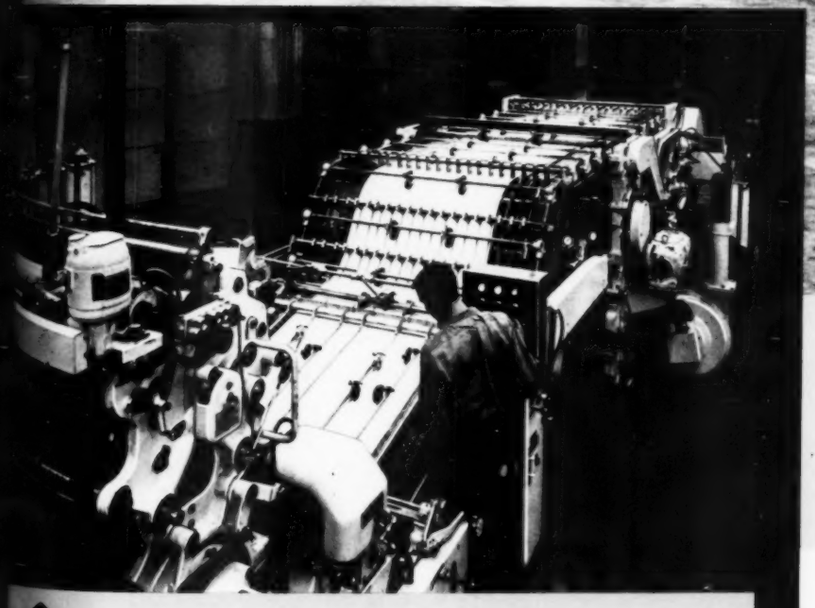
WESTCOTT & THOMSON'S PHOTOTYPOGRAPHY DIVISION now operates *eight* Fotosetters, day and night, in addition to other phototypesetting equipment. Complete film facilities, complementing these machines, make Westcott & Thomson the largest film plant in the United States and enable them to produce work for offset, letterpress or gravure printing. Pioneers in this field, W & T have found Fotosetters applicable to technical books, bibles, dictionaries, encyclopedias, catalogs, brochures, juveniles, and advertising composition.



OVER 5700 16-PAGE AIRLINE SCHEDULES PER HOUR are stitched, folded, and trimmed, top and bottom, on this Macey Stitch-A-Fold attached to a 31 x 46" folder at Colwell Press, Minneapolis, Minn. Fed from the folder, the Macey Stitch-A-Fold stitches the flat signature and then makes the final fold to deliver a saddle-stitched booklet.

t...

HARRIS·INTERTYPE



FIRST CARDBOARD APPLICATION OF ROLL-TO-SHEET FEEDING with a Cottrell "Web-Feed" unit on a Harris 43 x 60" six-color offset press at Riegel Paper Company's Folding Carton Division in Atlanta. The "Web-Feed", which cuts and feeds stock at the higher press speeds, permits continuous roll-feeding up to 28 pt. board for lithographing multicolor packaging items of various types. The results are substantial savings over pre-cut stock in sheets. Press can still be operated as standard sheet-fed. Inset photo is overhead view of the Cottrell "Web-Feed" in action – cutting and feeding stock into the press.

HARRIS INTERTYPE CORPORATION

HARRIS-INTERTYPE CORPORATION

GENERAL OFFICE: 55 PUBLIC SQUARE, CLEVELAND 13, OHIO

Harris Presses • Seybold Cutters • Macey Collators • Cottrell Presses
Intertype Typesetting Machines • Lithoplate Chemicals and Sensitized Plates • Gates Broadcasting Equipment • PRD Microwave Instruments

Better Production

(CONTINUED FROM PAGE 61)

ers should be financially rewarded once new methods have been integrated into the production schedule effectively.

"If we have a sincere interest and desire to improve production, a good standards program will demand that we do so," commented Don Krueger, secretary, W. A. Krueger Co., Milwaukee, in a talk on production standards. "Work that precedes development of the standards will be our main vehicle for production improvement. Once standards are developed, further benefits are derived from checking actual performance against the standards."

Various methods used in developing standards, as outlined by Krueger, included: The ivory tower method or just guessing, checking historical data, talking to men actually doing the job involved, and use of PIA's production PAR. Use of PAR will tell what kind of production can be expected from equipment and employees, Krueger said.

A trained, competent employee is the first ingredient needed in an effort for a printing plant to reach PAR in its production, Krueger said. Making the best use of present equipment properly maintained and accessory items available when needed, were other factors mentioned.

Also: Provide the best possible working conditions for employees, analyze results and take steps to improve and correct defects, investigate new methods of doing a job, and constantly be on the lookout for new ways of improving over-all production.

"The results obtained from your production standards are in proportion to the time spent," the speaker stated. "Don't time your operations the way they are; study and improve them to the best of your ability before you time them. Otherwise you may only be finding out how bad you are. Finally, check your future performance against the established standards."

The production session ended with presentation of three case histories of ideas used successfully in plants to reduce production costs. Joseph Edwards, president, Edwards Brothers Inc., Ann Arbor, Mich., reported on a plan designed to reduce the amount of waste and rerun jobs in his plant.

The monthly cost of this spoilage was reported to the employees along with the resulting amount lost to the employees' profit sharing plan. The workers became instilled with a desire to aid in reducing the volume of rerun jobs which in turn reduced production costs.

Richard Long, plant production manager, American Book Co., Cincinnati, reported that speed controls on quad folders and collators in his plant had been relocated where the operator could reach them from his normal operating position. This has aided the running of various types of stock for the greatest production efficiency.

Tachometers Installed

Installation of tachometers on a number of machines in the American Book Co. plant has encouraged workers to obtain a little more speed and also provides the foremen with a quick check on how well the various jobs are running, Long reported.

Daniel Heeter, president, Heeter Lithographing Co., Pittsburgh, believed there is "no set pattern for reducing costs in printing plants." What works well in one plant will not work in another, he indicated. He advocated checking the design of a plant to see what time and money savings will result from changes in the plant layout. If a bottleneck develops in any department, operations in that department should be observed.

One session of the technical forum consisted of a panel discussion on bindery, composing room, letterpress and litho operations.

Replying to a question on the status of Dycril plates in the dry offset field, Paul H. Smith of Du Pont stated that with the use of Dycril the lithographer can enter the letterpress field. Dr. Marvin C. Rogers, executive director, Photoengravers Research, Inc., Park Forest, Ill., echoed this statement when he allowed that Dycril and powderless etched plates enable the litho operator to give letterpress quality and get into the letterpress field.

In conjunction with a question on how long to hold type after reproduction proofs have been made, Dr. Rogers indicated that a letterpress printer can store reproduction proofs or negatives from a job and rerun the job again using either Dycril or powderless etch plates. He

WHAT'S AHEAD FOR THE READER

A two-in-one package of *Printing Production* will be delivered to readers next month—the regular December issue with all its usual features and the new Where To Buy Guide, the oldest and most complete of its kind in the printing industry.

Printed on the familiar yellow stock, the Where To Buy Guide for 1962 includes more than 100 pages which have been completely revised and brought up-to-date to show accurate supply sources of printing equipment and supplies.

The Guide contains listings of more than 1000 different companies who supply the Graphic Arts industry. Departmentalized sections are for your convenience in locating supply sources for the machines and products you plan to purchase next year. In addition, there are complete sections on Graphic Arts trade names; alphabetized listings of manufacturers, suppliers and dealers; 18 pages of important press specifications, and information for the printer on paper and envelopes.

Among the good reading in next month's issue are stories on paper waste in web offset printing, lighting a newspaper composing room, a new system for processing typesetting machine tape, and a new angle to color printing. There also will be an on-the-scenes report of the convention of the American Photoengravers Assn.

The regular features of *Printing Production* are included, too. There will be big value reading and valuable reference information in the year-end issue.

orts show that 8 out of 10 rollers
l web offset presses are
EAL ROLLERS

Designers and builders of these high efficiency offset presses know that they must be teamed with lithographic rollers that can keep pace with their relentless speeds. Rollers that can turn out 20 to 25 thousand impressions per hour . . . hour after hour . . . ! Ideal makes no claims! The facts tell our story.

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indicated that an even better job can be obtained on the second press run provided an early press sheet from the first run is used for the reproduction proof. The early press proof is preferable for use in making the plate than a repro proof made from the worn type after the initial press run.

What should printers be doing to get into and accept the wrap-around process with the use of Dycril or powderless etched plates? Dr. Rogers replied that these new plate developments have made it possible for the use of phototypesetting to enter into the letterpress field. Dycril plates can be made with less skill than needed for other conventional plates. Printing from original plates, such as from a Dycril plate, reduces makeready time and increases press quality as the plate has a more accurate printing surface, Dr. Rogers added.

continued on page 102

PIA Convention Pictorial

(All names read left to right)

1—The George Hantscho Co. was represented in Pittsburgh by Andrew P. Monroe, Jr., and Ed Ryan.

2—Looking at the self-advertising campaign specimens are Chester E. Howell, general manager, and Fred E. Howell, production control, both of F. M. Howell & Co., Elmira, N. Y., and Whelan J. Flaherty, director of planning and estimating, Christopher Press, Rochester, N. Y.

3—Among those from Cincinnati were Bernie Mellman, vice president, and Alfred M. May, president, both of Alfred M. May Co.

4—Posed in the ballroom are Jack R. Smith, personnel manager, and Arthur H. Gratz, president, both of Herbick & Held Printing Co., Pittsburgh, and Clifton Whaling, manager, Graphic Arts Assn. of Michigan, Detroit.

5—Checking an issue of PIA's *Convention Daily* are Dwight E. Vicks, Jr., vice president and general manager, Vicks Lithograph & Printing Corp., Yorkville, N. Y., and Louis T. Millette, president, Modern Press, Inc., Sioux Falls, S. D.

6—Western New York Staters pictured at the convention are Gordon A. Rambert and Henry G. Lyon, both of Burroughs Corporation's Todd Company, Rochester, N. Y., and George Strebel, manager, Printing Industries of Western New York, Buffalo.

NAPL Convention

(CONTINUED FROM PAGE 59)

the planning and creative phases of projects which they will reproduce.

The second challenge and factor pertained to the problem of producing top quality work from Type C prints. Although Type C prints are reported to be ideal for reproduction over other methods, Taylor said, the color range is greater than is possible to duplicate with ink. Deep reds, blues, greens and blacks are much deeper in tone than process inks will reproduce. Also, shadow detail, while difficult to maintain in all photomechanical reproduction, is particularly so from a Type C print, he added.

All Day Technical Session

The conference concluded with an all day technical session cosponsored by the Litho Club of New York and the National Assn. of Litho Clubs. John L. Kronenberg, manager, Commercial Printing and Papers Div., S. D. Warren Co., Boston, served as moderator of a six man panel considered to be experts in their respective areas of the lithographic field. Questions from the audience on all phases of the industry were answered.

In reply to a question asking what is the future and effect of the new wrap-around presses on the Graphic Arts, Pete Rice, president, Capricorn Litho Co., Inc., New York, stated that they have a definite area of use. He indicated that the platemaking stage is awkward at the present time and that developments must come in this area before the wrap-around press can be competitive with other presses in use today.

The lithographer will take greater advantage of the wrap-around process than will the letterpress printer, according to Michael H. Bruno, research director, Lithographic Technical Foundation, Inc. He indicated that one advantage the process offers is the ability to print without water.

Kronenberg stated that lithographers are not necessarily wedded to the use of water and believed they would be happy to see water eliminated from the litho process, perhaps through the use of wrap-arounds. Philip Quartararo, plant superintendent, Kipe Offset Process

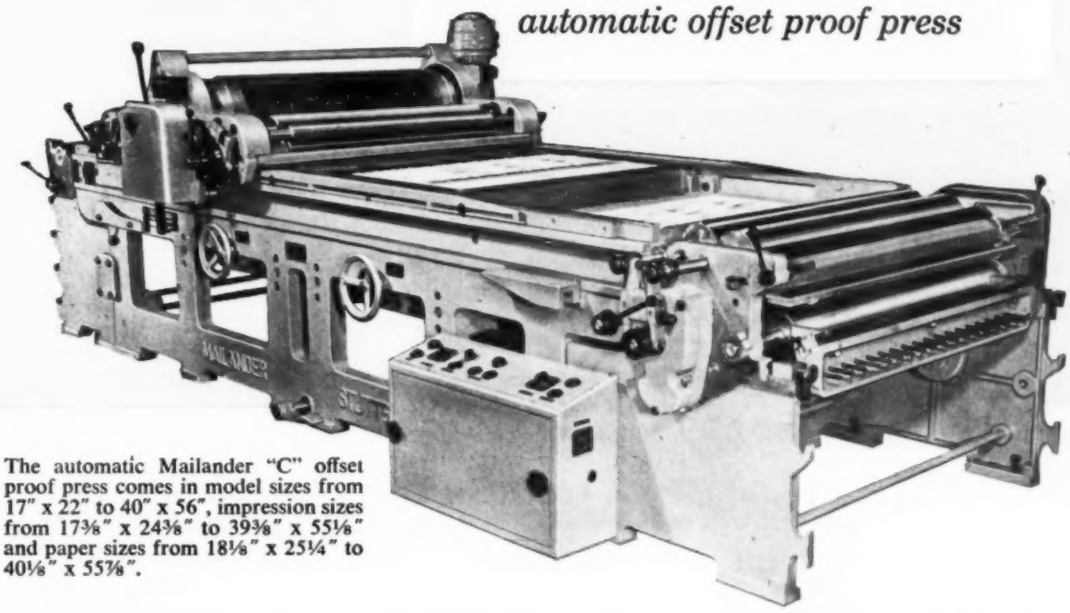
"Just 3 minutes?"

"Yep . . . just 3 minutes!"

Cut wash-up to 3-5 minutes

with the MAILANDER "C"

automatic offset proof press



The automatic Mailander "C" offset proof press comes in model sizes from 17" x 22" to 40" x 56", impression sizes from 17⅜" x 24⅜" to 39⅜" x 55⅛" and paper sizes from 18⅛" x 25¼" to 40⅛" x 55⅞".

But you get far more than fast wash-up. Each Mailander "C" offers you completely automatic inking and dampening as well as wash-up. Easy-to-adjust settings that let you control color register. Up-to-330-impressions-per-hour speed. One-lever plate positioning. Smooth stops and starts that minimize press wear. Your choice of five models.

To save time, work and paper on every job, do your proofing on a Mailander "C". Write for complete details on Mailander presses and HCM service – today.

MAILANDER

Offset Proof Presses

Product of J. G. Mailander, Stuttgart, West Germany

Distributed in the U.S. exclusively by:

80 Varick Street
New York 13, N. Y.

HCM CORPORATION

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Co., Inc., cited the need for a smooth paper for use with wrap-around presses and indicated that platemaking will have to be done on a photographic basis.

Answering a question about the latest developments in dry offset, Bruno said that wrap-arounds have taken the interest away from dry offset. Dry offset needs more critical specifications, is a pressure process and varying pressure affects the quality of printing, he added.

Speaking about the future of wipe-on plates, Bruno replied they "are here to stay." They hold an edge over ordinary plates and some platemakers prefer wipe-on plates as they have a greater control over the platemaking process. Quartararo added that wipe-on plates are catching on very fast throughout the industry.

Fluorescent Dye Stability

Regarding the stability of fluorescent dyes in white paper, Harry R. Baldwin, supervisor of printing sales service, Champion Papers, Inc., indicated that longevity of the dyes are not too great at the present time. Titanium is added to bolster opacity of the paper and more bleaching is done to get a whiter sheet as demanded by customers. He indicated that a neutral sheet was needed to get good reproduction.

With the increase in web offset, what is the paper industry doing to produce rolls of paper so as to have less splices, etc.? Baldwin stated that manufacturers are getting better temperature and humidity conditions in their finishing areas. He cited the problem of meeting customer requirements due to the variance in width required. He added that rolls of paper stood on end probably run better on the press than those stored in another manner, although problems will occur to a degree either way. Everytime a paper roll is moved it introduces the possibility of an added defect in the roll, he concluded.

Does roll film lay as flat as cut film after processing and drying?

Daniel D. Miller (left), Du Pont technical representative, discusses the NAPL equipment show with Richard Bult, vice president, Bult Printing Corp., Albany, N. Y.

Louis J. Federmack, head of camera and art departments, Barnes Press, Inc., New York, believes there is no difference especially on stable base film. If there is any difference, it is so slight as to be negligible. He added that roll film with an outside emulsion would be better to use if care was taken so the emulsion side would not be scratched in removing the film from the box.

Camera Work Questions

Federmack also answered other questions relating to camera work. It was indicated that a set of halftone positives for offset plates must be made differently for use with coated or offset stock. Offset stock prints fuller than coated stock, Quartararo said, and Federmack suggested sharpening up the positives when printing on coated stock. He also indicated that if a shop is continually waiting for negatives and spends about $30,000 per year for negatives from an outside source it might be feasible to install camera equipment in the plant.

In answering a question on overcoming the problem of matching customer's color swatches on white stock when the job is to be printed on colored stock, it was suggested to resort to just trial and error. The panelist advocated that swatches be proofed on the job stock intended for use. Bruno told about the LTF-designed whirling disk test. Spinning color samples are viewed in front of the job stocks to determine how process inks will look on various stocks.

Lithographic Displays Popular at New York Show

(All names read left to right)

1—George Hagopian, superintendent, Edwards Brothers Inc., discusses the Baldwin variable control water stop with Harold W. Gegenheimer, general manager, Baldwin-Gegenheimer Corp.

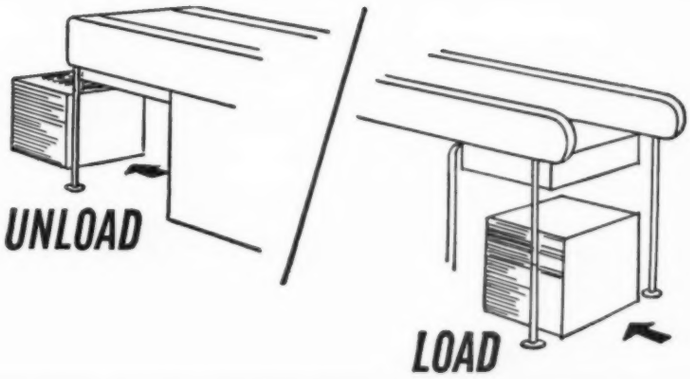
2—Operation of the Monophoto holds the attention of W. A. Benjamin, president, W. A. Benjamin Inc.; Jacques Hakim, sales manager, Vance Weaver Composition, Inc.; John Warne, Lanston Monotype Co., and Vance Weaver, president, Vance Weaver Composition, Inc.

3—Watching a 20 in. by 26 in. Baumfolder in operation are Tex Renz, Baumfolder Div., Bell & Howell Co.; Ken Griffiths, sales manager, and Tom Sears, president, both of Sears Ltd., Toronto and Montreal, Can., and Bill Liddell, Baumfolder Div., Bell & Howell Co.

4—George D. Krug, president, Krug Litho Art Co., N. Kansas City, Mo., discusses cameras with William Dombey, Process Cameras & Equipment Inc.

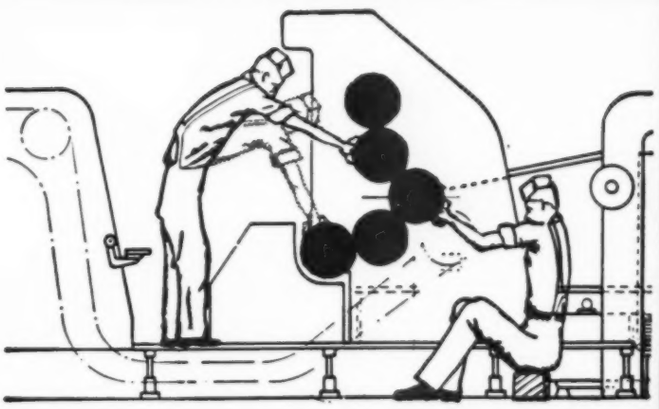
CONTINUOUS OPERATION

Save valuable time by changing loads without stopping the press—non-stop feeder and continuous delivery are standard on these Miehle Two Color Offsets. You load and unload while the press keeps printing...saves blanket wash-ups ...drastically reduces waste sheets. Continuous operation can mean 3% to 25% greater production, depending on stock and job requirements.



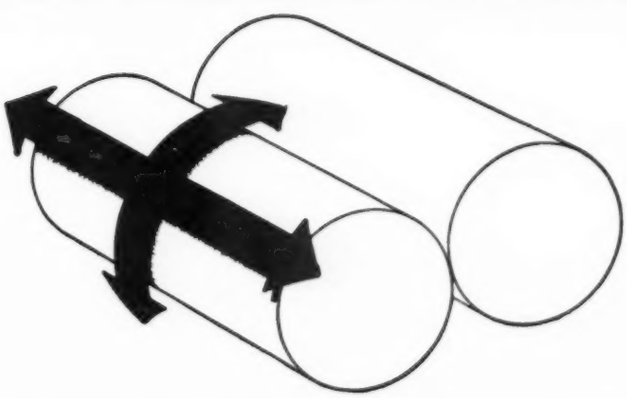
COMMON IMPRESSION ACCESSIBILITY

Greater accessibility, quicker makeready and perfect register are some of the advantages of the common impression cylinder design of Miehle Two Colors...all cylinders easily reached for wash-up and makeready...one set of grippers to print two colors...no skeleton wheel marks between colors...less maintenance—one set of grippers, no transfer drums...and True Rolling cylinders for print fidelity.

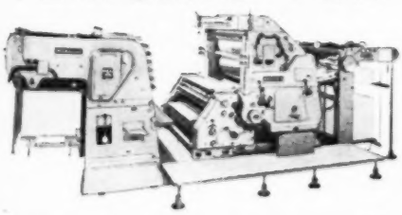


RUNNING REGISTER CONTROL

Register adjustments can be made while the press is running, without stopping production. Front guides can be moved in and out or cocked...side guide can be adjusted. The second plate cylinder can be set for hairline register—both across and around. All controls conveniently located outside the press to save valuable production time.



FEATURES FOR PROFITS—MIEHLE 2/COLOR OFFSETS



These are just a few of the profit-building features of the Miehle 38 Two Color (25 x 38"—7000/hr) and the smaller 25 and 29 Two Colors. There are many more, such as swing gripper in-feed for hairline register at any speed and extra-large form rollers for smoother inking. You owe it to yourself to see these outstanding presses in operation.

THE MIEHLE COMPANY
Division of Miehle-Goss-Dexter, Inc.
Chicago 8, Illinois

NOW IS THE TIME TO BE RIGHT—TALK TO MIEHLE

For More Information Circle 127 on Reader Service Card

New Equipment and Supplies

You may easily and quickly obtain additional information on the new equipment, supplies and services mentioned on these pages by completing the special Reader Service Card conveniently found in this issue.

NEW LISTOMATIC CAMERA HAS ADJUSTABLE FEATURES

A re-engineered sequential card composition camera, the Recordak Listomatic camera Model III, has been announced by Recordak Corporation, Sub. of Eastman Kodak Co. Among the camera's applications are the preparation of parts lists, telephone directories, catalogs and other successive editions of constantly changing lists.

The Model III offers several new features. Any type size, from a 20% enlargement to a 55% reduction of original copy, can be obtained on the film in a few seconds, according to the

manufacturer. Line spacing adjustment ranging from six lines per in. up to 14 lines per in. is possible at all reduction sizes. Other features include a built-in optical device which permits a visual check of the card image and the film alignment area, and simplified film loading. CIRCLE NO. 275 ON READER SERVICE CARD.

OFFERS NEW ENVELOPE COLORS

Envelopes in Peninsular Snoweave Text are now stocked in fluorescent white and available in five colors from Peninsular Paper Co. Material printed on Peninsular Snoweavé can also be mailed in matching envelopes, which come in six sizes. CIRCLE NO. 260 ON READER SERVICE CARD.

NEW GRAPHIC ARTS FILM INTRODUCED BY ANSCO

Reprolith Hy-Ortho is a Graphic Arts film that has been introduced by Ansco, Div. of General Aniline & Film Corp. It is designed for photo-mechanical applications to give high contrast, to allow wider exposure and development latitude, and to provide maximum density and etching characteristics.

The high speed film has an orthochromatic emulsion coat on 0.004 in. Plestar base. A new anti-abrasion emulsion surface helps to eliminate scratches and marring from ordinary handling. CIRCLE NO. 255 ON READER CARD.

ROYAL ZENITH INTRODUCES TWO COLOR OFFSET PRESS

A new two color offset press will produce 23 in. by 30 in. color work at speeds up to 17,000 i.p.h. or 8500 sheets an hour, according to the manufacturer, Royal Zenith Corp.

The two color press uses the same plates that 30 in. single color presses use. The inking system on each printing unit consists of 20 rollers of varying diameters, each riding on ball bearings. The main drive is actuated by helical gears.

The new Royal Zenith press has a stream feeder, three-point register control with pull side guides, pulsed tapes and automatic sheet control. The controls on each unit are centralized for convenient access, and outside press controls can be adjusted while the press is running. All feeder, feedboard, register and roller adjustments are made with knurled knobs for hand adjustment. CIRCLE NO. 284 ON READER SERVICE CARD.

APPLICATOR FOR TAPE

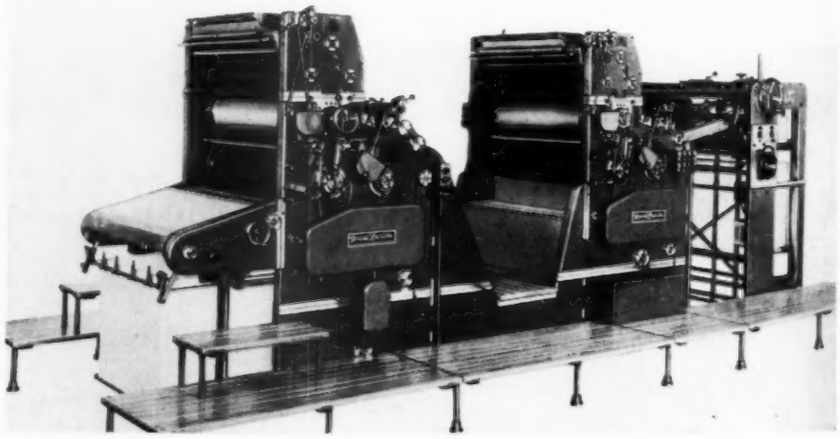
The Velvet Touch applicator for pressure sensitive tape has been announced by Velvet Touch Corp. Any

½ in. wide, 1 in. core tape—masking, vinyl, cellophane—may be used in the applicator. According to the manufacturer, the applicator permits one hand operation. The tape is rolled out to the desired length and is cut by tilting and twisting the applicator slightly. CIRCLE NO. 285 ON READER SERVICE CARD.

EIGHT STATION COLLATOR

An electrically operated, automatic eight station collating machine will be marketed by the Business Machines Div. of Fairchild Camera and Instrument Corp.

Called the Fairchild Model RH-1, the friction fed machine collates and



Speeds up to 8500 sheets per hr. are claimed for Royal Zenith's new two color offset press, made in a 23 in. by 30 in. size.

ANOTHER QUALITY MAT FOR NEWSPAPER REPRODUCTION

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BE OUR GUEST! TRY THE WONDERFUL NEW CERTIFIED PINK COMAT

ORDER A CASE OR A COMPLIMENTARY PACKAGE OF SAMPLES. ONE OF OUR REPRESENTATIVES WILL CALL AND HELP YOU GET OPTIMUM RESULTS FROM THE COMATS. STEREOTYPERS WHO TRY THEM ARE ENTHUSIASTIC OVER THE RESULTS.

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For More Information Circle 36 on Reader Service Card

staples at a speed of 3000 units per hr., or 24,000 sheets, according to the manufacturer. It will handle most all paper in sizes up to 8 in. by 14 in. Eight hoppers are designed to accommodate one ream each of paper. The RH-1 was designed principally for mailroom, print shop and letter shop application as a machine in which signatures, forms and allied work can be gathered and stapled. CIRCLE NO. 253 ON READER SERVICE CARD.

MARKETS PRESS CLEANSER

Fragrance Process Co., Inc., is marketing a press cleanser which dissolves and removes wet and dry ink particles from the ink fountain and rollers. The cleanser is a soft, colorless neutral paste. The manufacturer recommends its use when preparing the press for a new run, especially when light color ink is to follow a run with dark ink. CIRCLE NO. 274 ON READER CARD.

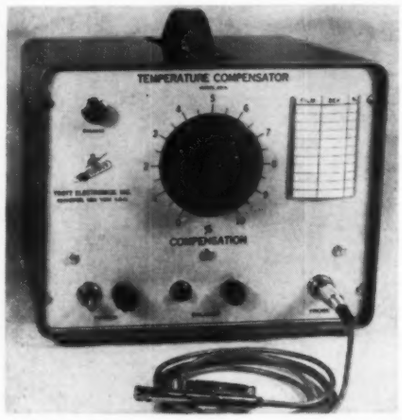
LITHOFLO FILM PROCESSOR HAS AUTOMATIC DEVELOPING

The Lithoflo Graphic Arts film processor, now manufactured exclusively by LogEtronics, Inc., is equipped with an automatic developer control for processing uniformity in photolithography and photoengraving. The film processor in one cycle automatically and continuously develops, fixes and washes cut-sheet film and waterproof negative papers for halftone and line work.

The unit will accept all sizes of cut film from 8 in. by 10 in. to 20 in. by 24 in. The patented belt and roller racks are said to have an unusual pressure action on the film. A negative can be fully processed in 4 min., using a developing time of 1 min., according to the manufacturer. CIRCLE NO. 282 ON READER SERVICE CARD.

TEMPERATURE COMPENSATOR CONTROLS NEGATIVE DENSITY

Trott Electronics, Inc., has introduced a temperature compensator designed to eliminate variations in negative density caused by changes in de-



veloper temperature during film processing. An electronic control package changes the speed of an electric timer to compensate for temperature changes.

The Compensator's control is accomplished by inserting the stainless steel themistor probe in the processing fluid, setting the dial, and developing the film. As the temperature of the solution changes, the speed of the clock will change, thereby shortening or lengthening the processing time. CIRCLE NO. 288 ON READER SERVICE CARD.

TWINE BUNDLING MACHINE OFFERED BY UNITED SHOE

A twine bundle tying machine for newspaper and magazine mailrooms has been built by United Shoe Machinery Corp. The makers of Tymaster claim it has an operating speed of 40 cy. per min. and a tying rate of up to 30 bundles per min.

The Tymaster uses sisal twine, but can be adapted to use other twine materials. The machine puts a spiral wire joint on the twine which, the manufacturer states, will help retain the twine's strength. It handles bundles up to 24 in. high and 21 in. wide, and has a self contained hydraulic compression unit which adjusts for different degrees of bundle compression.

On casters, the machine can be moved from one production line to another; it can be connected to any suitable electrical source. CIRCLE NO. 254 ON READER SERVICE CARD.

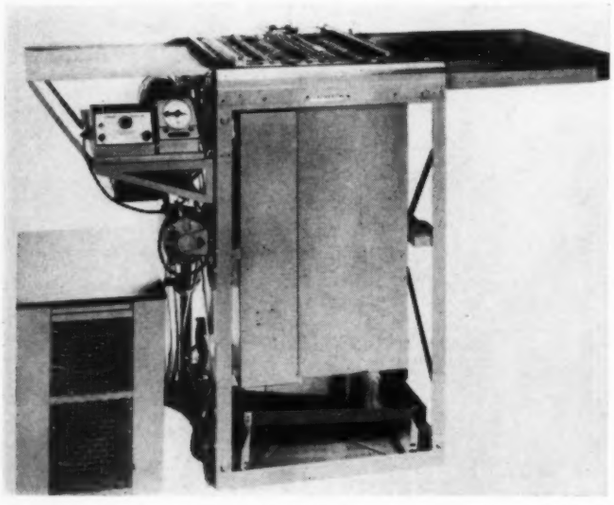
FOLIO EXTRABOLD TYPE

Bauer Alphabets Inc. has announced the addition of Folio Extrabold to its Folio type family. The size range of this type includes 16, 18, 30, 36, 42, and 54 pts. Three more sizes will be added shortly. CIRCLE NO. 256 ON READER SERVICE CARD.

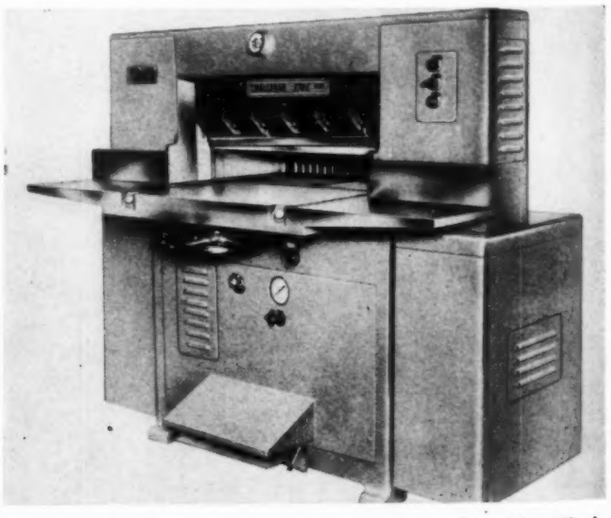
CHALLENGE OFFERS THREE 37 IN. POWER PAPER CUTTERS

Three models of a new 37 in. power paper cutter will be available from Challenge Machinery Co. The standard 370E model has a manually operated back gauge for normal cutting operations, the Model 370EPB has a power operated back gauge, and the Model 370ED is equipped with a power back gauge and automatic spacer. Sheets up to 35 in. by 45 in. can be cut and 10 in. by 13 in. booklets can be trimmed three up using the split back gauge.

The cutter is particularly designed for the medium sized plant, and includes such operation features as automatic power clamping, light line indication of the cutting line, and push buttons. CIRCLE NO. 281 ON READER SERVICE CARD.



LogEtronics, Incorporated's Graphic Arts film processor is equipped with an automatic developer control which agitates, filters and circulates the developer.



Features of a 37 in. power paper cutter introduced by Challenge Machinery Co. are push button operation, light line indication of the cutting line, and automatic power clamping.

"Why new Champion Bond?"

New Champion® Bond was developed through Champion Papers research for one purpose: to offer a combination of printing-typing qualities never before contained in a single bond. It has lived up to expectations so well that we've let it tell its own story throughout the preceding pages of this magazine. Available in white and eight new colors...13, 16 and 20 lb. weights...new Champion Bond is priced and classified as a number four bond. Call in your Champion Papers merchant or your printer for a complete demonstration. Discover how misleading the term "number four bond" can be when it applies to a paper as fine as this.

CHAMPION PAPERS

Knightsbridge/Hamilton, Ohio

This is 20 lb. Champion Bond

SYNTRON DEVELOPS LARGER TABLE DECK PAPER JOGGER

Syntron Company announces the development of its largest single action, table deck unit paper jogger, Model

CPJ-60. The caster mounted unit is equipped with electromagnetic drive and has 1120 sq. in. of jogging surface. It is expected to find principal application in jogging lifts of magazine and catalog signatures for bindery preparation. CIRCLE No. 266 ON READER SERVICE CARD.

WEB CONTROL DEVICE

A web controller, developed by the John Dusenbery Co., Inc., gives continuous automatic control of web tension in printing and processing film, paper and fabrics. The Auto-Tensioneer can be installed at the unwind, rewind or at any location needed. Web tension, as measured by the sensing roll, is relayed through a pair of load cells to automatic controls. These in turn operate a servo-valve, which adjusts the brake up or down with pneumatic pressure to provide the web tension wanted. CIRCLE No. 252 ON READER SERVICE CARD.

HARRIS ADDS 65 IN. SABER PAPER CUTTER TO LINE

Addition of a 65 in. size to round out the Saber II line of 41 in., 47 in. and 54 in. power paper cutters has been announced by the Harris-Seybold Div. of Harris-Intertype Corp. The new cutter is available as a power back gauge or Auto-Spacer model, with a 77 in. Seybold Air Film back table and two auxiliary steel side tables standard equipment on both models.

The new Saber has an hydraulic cushion-contact clamp; in-line cutting action; fully automatic Auto-Spacer with six-sided spacer bar and removable job strips; knife changing knobs as an integral part of the electrical control panel, and spline type electromagnetic brake clutch. The Saber is equipped with a 7½ h.p. drive motor and a ¾ h.p. back gauge motor. It is said to provide up to 40 cuts per min. Right and left hand steel tables, and eye-level clamp pressure adjustment are standard equipment for the paper cutter. CIRCLE No. 283 ON READER SERVICE CARD.

nuARC MARKETS ALL-PURPOSE WORK AND STORAGE CABINET

The nuArc company has an all-purpose table with formica top, steel base and locking drawers for use in Graphic Arts plants. The table, called a Jet Companion, is 36 in. high to match stripping, lineup and other work ta-

bles. It has three heavy duty drawers. Individual locks are provided for each man on each shift for his tools. Top measures 28½ in. by 34 in.; drawers are 25 in. long, 28 in. wide and 7 in. deep. CIRCLE No. 286 ON READER CARD.

NEW FLUORESCENT INKS

Seaboard Printing Inks, Inc., is producing a line of inks called Fireball Fluores-Inks for letterpress and offset use. Seaboard claims that the inks provide heavy coverage in a single impression and that fluorescent jobs can be printed without overloading. There are six Fireball colors: Green, lemon yellow, gold yellow, orange, cerise and red. CIRCLE No. 268 ON READER CARD.

CONSTANT TENSION UNIT FOR EXISTING EQUIPMENT

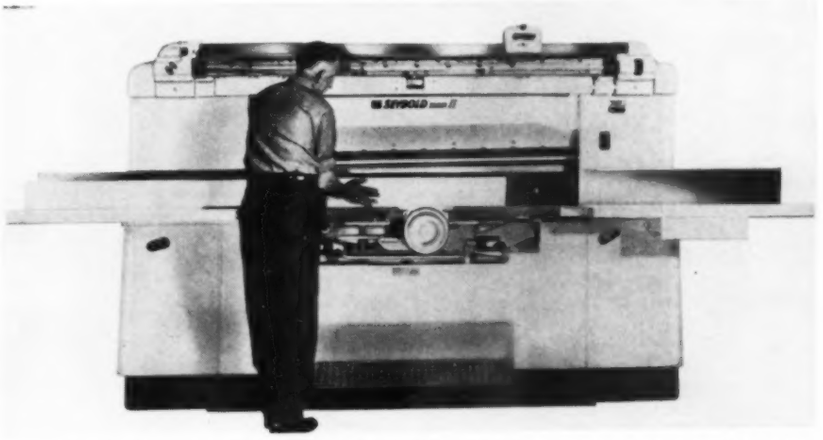
Stanford Engineering Co. is marketing a pneumatic constant tension unit, Model 900, which may be adapted to existing printing equipment. Its operation is based on plant air being supplied into the two connected air diaphragm cylinders. The amount of air supplied sets the tension value in the sensing roll. On the end of the sensing roll pivot shaft is a cam which regulates air supplied to the brake, and automatically controls web tension.

The Model 900, when used with the automatic web guide and the Model 900 unwind or rewind stand, is a complete unit for feed-to-process of paper, film or other materials. CIRCLE No. 259 ON READER SERVICE CARD.

DESK OR BENCH PLATEMAKER

A desk-bench type platemaker, with a maximum printing area of 15 in. by 20 in., has been introduced by Mervap Cold Light Products. Known as the

Model 1520, the unit is reported to expose presensitized plates in 2 min. and transfer plates in 30 sec. The complete unit consists of vacuum pump and electric timer. A three-way master switch provides manual or timer operation. CIRCLE No. 287 ON READER CARD.



Harris-Seybold completed its line of Saber II paper cutters by adding a 65 in. size. The Auto-Spacer model shown features a 77 in. Air Film back table.

GOODYEAR IMPROVES HI-FI OFFSET PRESS BLANKET

Rubber compounds developed especially for the printing industry have produced an improved version of Goodyear Tire & Rubber Co.'s Hi-Fi offset press blanket, according to a recent announcement from the manufac-

turer. The redesigned blanket has a printing surface of a new elastomeric formula which offers resistance to staining, even on extended runs with troublesome inks, Goodyear states.

The blanket is available in two, three, four and six ply construction with a choice of red, green, black or blue surface color. It is made with the same controlled stretch and resistance to damage from batters as the previous blanket, the company claims. CIRCLE No. 289 ON READER SERVICE CARD.

BROWN ADDS 14x18 CAMERA

W. A. Brown Mfg. Co. recently announced the addition of a 14 in. by 18 in. Escort camera to its line of equipment. This unit is designed for film capacities of 12 in. by 18 in. and 14 in. by 27 in.; its smaller companion is the 11 in. by 14 in. Escort. Features listed by the manufacturers include automatic diaphragm control, all metal construction, 9½ in. coated and color corrected lens, timer with reset device and built-in lighting. CIRCLE No. 290 ON READER SERVICE CARD.

COLORTRAN QUARTZ LIGHTS

Colortran Quartz line copyboard lights, said to be suitable spectrally for color separation work, have been announced by Natural Lighting Corp. Entire copyboard illumination is achieved by the units through housing and reflector design as well as employment of a new reflector material. CIRCLE No. 291 ON READER SERVICE CARD.

COLD SETTING ADHESIVE FOR MOUNTING PLATES

A cold setting contact adhesive for mounting printing plates, named Wellco C, and a companion solvent, has

been developed by Wells Manufacturing Co. The manufacturer claims the adhesive will bond all types of metal to each other, metal to wood, metal to plastic, rubber to wood and Dycril plates to wood. Wells also claims its adhesive is not affected by ordinary type cleaning solvents. CIRCLE No. 267 ON READER SERVICE CARD.

NEW HOMMEL DEVICE BARS COPYBOARD FLUORESCENCE

A simple device for barring fluorescence from the copyboard has been announced by Theo. Hommel, Inc. The Fluro Bar consists of a pair of heavy duty brackets designed to clamp on the arc lamp and hold a UV barring screen of Du Pont Mylar. The clamps are made of solid aluminum.

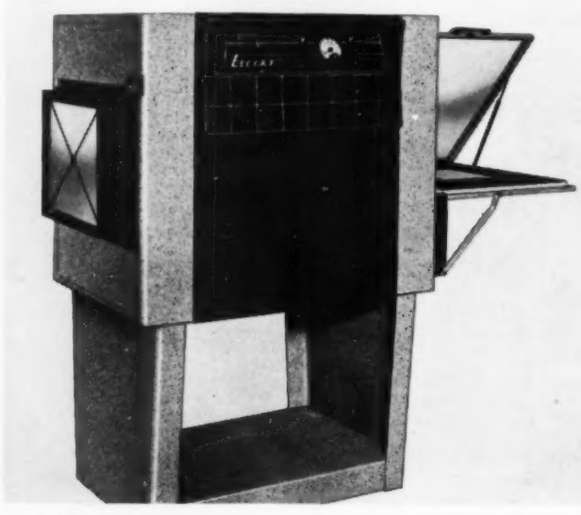
The manufacturer says that UV light phenomena, produced by carbon arc sources, can stem from paper or its coatings, from artist's pigments, retouching dyes or from inks, and that it can influence both mask calculations and color separation results. The Fluro Bar is said to remove the ultra violet component of the light source. CIRCLE No. 250 ON READER SERVICE CARD.

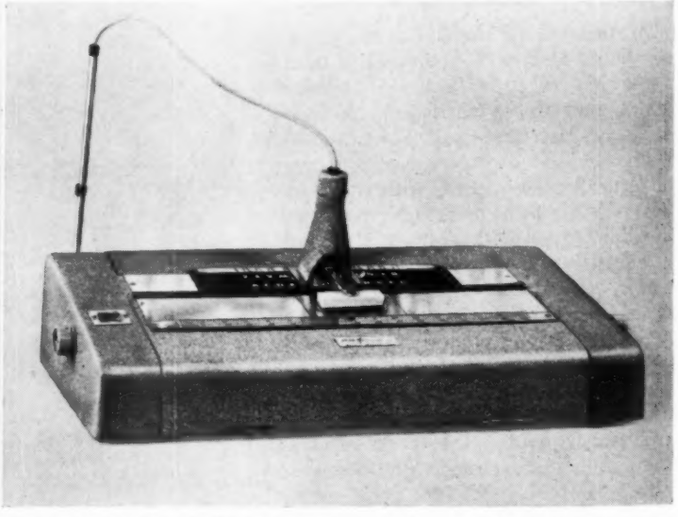
PHOTOCOPY OFFSET DEVELOPER

Agfa, Incorporated has introduced a photocopy developer which contains no alcohol, for use in offset plate processing. The developer comes in concentrated form and is mixed for use with equal parts of water. The elimination of alcohol, reports Agfa, reduces evaporation and formula shift problems. CIRCLE No. 258 ON READER CARD.

PROTYPE REDESIGNS ITS PHOTOLETTERING MACHINE

Protype Graphics, Div. of Electrographic Corp., has redesigned its photographic type composition machine. Features incorporated in the new Protype model include roll up paper integrated into the machine, self contained paper magazine, magnified line spacer and line spacer set knob, line advancer knob to permit vertical measurement and interlineal spacing, and magnified character index spacer to control letter spacing. The Protype's work surface allows paper size up to 17 in. CIRCLE No. 292 ON READER CARD.





Left: W. A. Brown Mfg. Co.'s new Escort camera model is 14 in. by 18 in. Right: Protype's redesigned photolettering unit.

SIMPLIFIED FULL COLOR FOR ROP REPRODUCTION

A new full color separation process for ROP newspaper color reproduction has been developed by the Polycolor Company. It is stated that economies are achieved by reductions in the cost of unavoidable hand color correction. Polycolor also states the new process enables newspapers to make high grade sets of color engravings with standard black and white engraving facilities.

Coincidental with this announcement, Polycolor indicated inauguration of syndications to make three and four color feature material available to newspapers which are now able to include ROP color in black and white daily editions.

The feature material will include home service, food, fashion, industrial and other features suggested through a Polycolor advisory board. CIRCLE NO. 280 ON READER SERVICE CARD.

TYPE LOCKUP MAGNETS OFFERED BY CHALLENGE

Challenge Machinery Co. is offering a new product called the Quick Lock Magnet. The type lockup magnets have

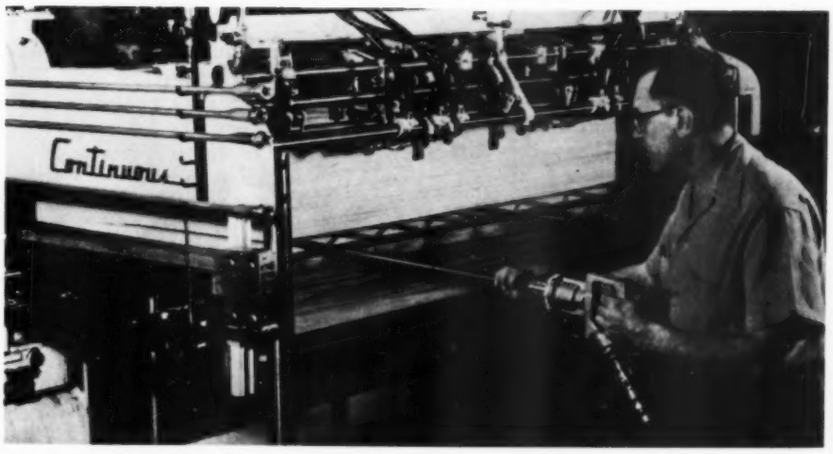
plastic tops and an inch wide stance that is said to prevent tipping. According to the manufacturer, type changes can be made by sliding the magnets away from the form and back. Two sizes are available: 1½ in. and 3¼ in. long. CIRCLE NO. 265 ON READER CARD.

NEW AGFA FIXER-LACQUER

A new combined fixer-lacquer for processing aluminum offset plates has been developed by Agfa, Incorporated. The fixer-lacquer is applied in a single step by sponge or wiper to the exposed and developed plate. It automatically fixes the image and provides the required lacquer coating, according to the manufacturer. CIRCLE NO. 293 ON READER SERVICE CARD.

MAGNACRAFT LABELING HEAD

Magnacraft Manufacturing Co. is introducing a Model A-61 labeling head for handling computer type labels. The unit can label a variety of printed material such as magazines, brochures, broadsides, newspapers, etc. The labeling head feeds, cuts and applies labels printed on the standard one label roll or the computer type two, three, four and five labels such as those produced by I.B.M. and similar computers. CIRCLE NO. 278 ON READER SERVICE CARD.



Harris-Seybold press feeder in operation: As pile is depleted, an Air Sword support rod is attached to an air hose and inserted near the bottom of pile to support remaining sheets. This eliminates the need for rehandling stock.

PAPER DRILLING MACHINE FOR LIMITED REQUIREMENTS

A paper drilling machine with large sheet capacity for plants having limited drilling requirements is now being marketed by Ottawa Manufacturing

Co. The F-10 will drill ⅛ in. to ½ in. diam. holes and will perform a variety of slitting and slotting operations. It features steel welded construction, 20 in. by 32 in. table, automatic back gauge, and direct drive spindle with thrust bearing.

Conversion kits are available from Ottawa to enable owners of the F-10 to add both a vacuum system for chip disposal and hydraulic power to their drills. CIRCLE NO. 277 ON READER SERVICE CARD.

HARRIS CONTINUOUS FEEDER USES AIR SWORD SUPPORT

A continuous feeder for sheetfed presses, with a new Air Sword support principle, has been announced by the Harris-Seybold Div. of Harris-Intertype Corp.

According to the manufacturer, the Air Sword principle eliminates the need for rehandling stock. The lift as it comes from the mill can be placed directly into the feeder.

The new support principle utilizes a number of tubular rods containing air jets. When the rods are attached to a compressed air source, air is forced through the jets and "lubricates" the rods with an air film to facilitate their insertion into a remnant pile. The rods then support the remnant pile, which continue to feed into the press, while the empty skid is lowered and a new skid brought into feeding position. Since the remnant pile is nearly depleted by this time, no air is required for withdrawal of the rods. CIRCLE NO. 294 ON READER SERVICE CARD.

WESTINGHOUSE CLAIMS NEW INTERIOR LIGHTING CONCEPT

Its first commercial application of an interior lighting concept has been announced by Westinghouse Electric Corp. The manufacturer claims its new product doubles what the eye can perceive by reducing blind spots caused by conventional lighting, and through improved depth perception.

The major change is in the diffusion panels which are made of light polarizing materials. Conventional light sources such as the fluorescent tube are used. Westinghouse engineers point out that their new product does not mean the use of stronger lighting. Increasing candle-power, they say, may only intensify such flaws as color fade and glare. CIRCLE NO. 262 ON READER SERVICE CARD.

PHOTON EXPANDS LINE OF PHOTOTYPESETTING DISKS

Photon, Incorporated, states that its phototypesetting system matrix disk line has been expanded to permit customers to order type faces in even quantities from two through 16 faces. A new approach also enables the company to supply special disks, each having two or four type faces. Type faces are available as selected by the customers for either partial or complete type face disks. CIRCLE NO. 270 ON READER SERVICE CARD.

MEAD PAPER ANNOUNCES BLUE-WHITE COVER COLOR

Mead Papers, Inc., has available a line of letterpress enamel and coated cover papers, and offset enamel and coated cover for black and white printing, both featuring a new blue-white color. Both lines are also available in a dull finish for a more subdued background. Mead recommends these grades for such printed material as annual reports, brochures, booklets, and catalogs. CIRCLE NO. 269 ON READER SERVICE CARD.

PROCESS COLOR SEPARATOR HANDLES UP TO 8X10 COPY

Durst (USA) Inc. has designed a process color separator called the G-184, a companion to the company's G-139. It handles negatives and transparency sizes from 35 mm. through 8 in. by 10 in. for offset lithography, photoengraving, gravure, collotype and silk screen operations.

The new G-184 is primarily an 8 in. by 10 in. machine, but its ability to handle smaller transparency formats makes it useful for backlog work, special masking and handling jobs, and ganging similar range small transparencies. A feature of the color separator is the vacuum transparency carrier, which minimizes dust and Newton rings, and reduces the need for oil immersion.

The carrier and condensers of the G-184 are designed to provide for the use of grey scales and color controls. Although it is compact, G-184 can make maximum enlargements because its vacuum board will raise and lower within inches of the floor. CIRCLE NO. 263 ON READER SERVICE CARD.

AIRMATIC METAL PUMP INTRODUCED BY NOLAN

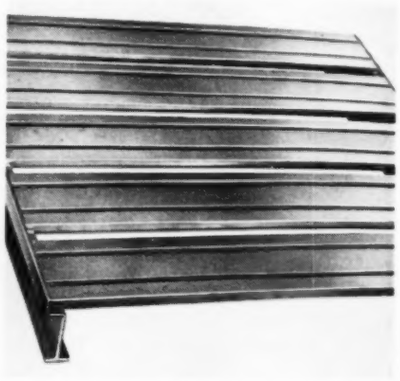
Nolan Corporation announces its design of a pneumatic metal pump for automatic transfer of stereotype metal from furnace to holding pot, or the semi-automatic transfer of metal from furnace to caster.

The Airmatic pump consists of a steel cylinder suspended within the furnace below the metal line. Molten metal is forced through the heated and insulated spout by the pressure of air directly on the metal. Control devices include an air pressure regulating valve and a time-delay Agaswitch, which are pre-set to provide the desired amount of molten metal. Each time the switch is activated, an equal amount of metal is released.

According to the manufacturer, the pump can be fabricated to virtually any dimension or shape required to meet capacity or space requirements. CIRCLE NO. 264 ON READER SERVICE CARD.

ALUMINUM PALLET ADDED TO MATERIALS HANDLING LINE

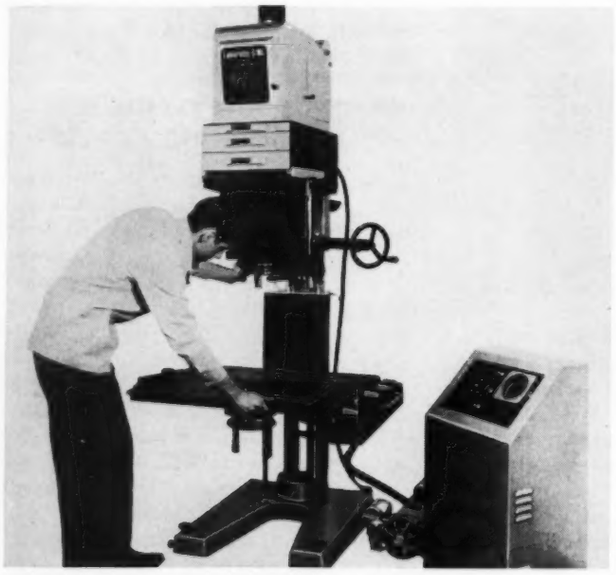
An aluminum pallet for assembly by the user has been added to the line of lightweight materials handling equipment built by Brooks & Perkins, Inc.



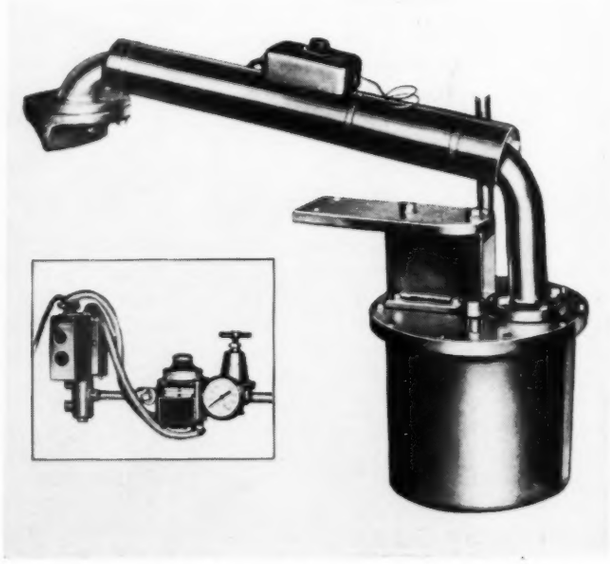
The do-it-yourself kit consists of side rails, grooved deck planks, pick-up and filler channels, bolts and lock nuts. It can be assembled with the aid of a wrench. Replacement parts are available. All six models of the pallet, in sizes from 36 in. by 36 in. to 48 in. by 48 in., have one-ton load capacity. Weights of standard models are from 35 to 59 lbs. CIRCLE NO. 272 ON READER SERVICE CARD.

COLOR KEYED INKS AVAILABLE

Colors Inkorporated has introduced a line of Keyed Colors of offset printing inks. The colors have been formulated to match those used in the 3M Brand color key proofing system. Purpose of the new ink line is to allow customers to have jobs printed with the same colors of ink used on proofs. CIRCLE NO. 295 ON READER SERVICE CARD.



The process color separator, G-184, recently introduced by Durst (USA) Inc. is shown in operation at left. It handles negative and transparency sizes from 35 mm. to 8 in. by 10 in.



A metal pump (right) by Nolan Corporation, features simplified design. It automatically transfers metal from furnace to holding pot, or transfers it from furnace to caster.

PRINTING INDUSTRY PATENTS

Covering patents issued recently. All new patents for the printing industry are reported exclusively for PRINTING PRODUCTION by Invention, Inc., an industrial patent research organization in Washington, D. C. Invention, Inc., presently has the only staff in the country that examines in the U. S. Patent Office, the complete printed copy, drawing by drawing and page by page, every one of the several hundred new patents issued each week. PRINTING PRODUCTION is the only trade publication in its field offering a report based on this complete coverage. For copies of the patents listed here specify the patent numbers and send 25c for each separate patent, or 10c for each trade mark or design patent (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Composing Room:

Typing Machine—This typewriter-like typing machine is supplied with 122 keys. Object in developing the machine is to supply a great range of special symbols and characters required for scientific composition, in addition to standard upper and lower case characters and figures. Typing is done on paper or duplicating masters. The type characters are contained in compact cases and consist of cast type such as are produced on conventional typecasting machines. An electrical circuit actuates the selected character together with proper spacing. No. 2,986,256 by Vance W. Weaver.

Linecasting Machine Knife Opener – For overhanging display figure work, a means has been provided to open and close the right hand knife automatically in tape operated machines. Also, a push-button for operating the right hand knife for manual operation of the machine has been provided. No. 2,987,171 by Paul Hilpman, Adams T. Rice and Leroy F. Albert, assignors to Mergenthaler Linotype Co.

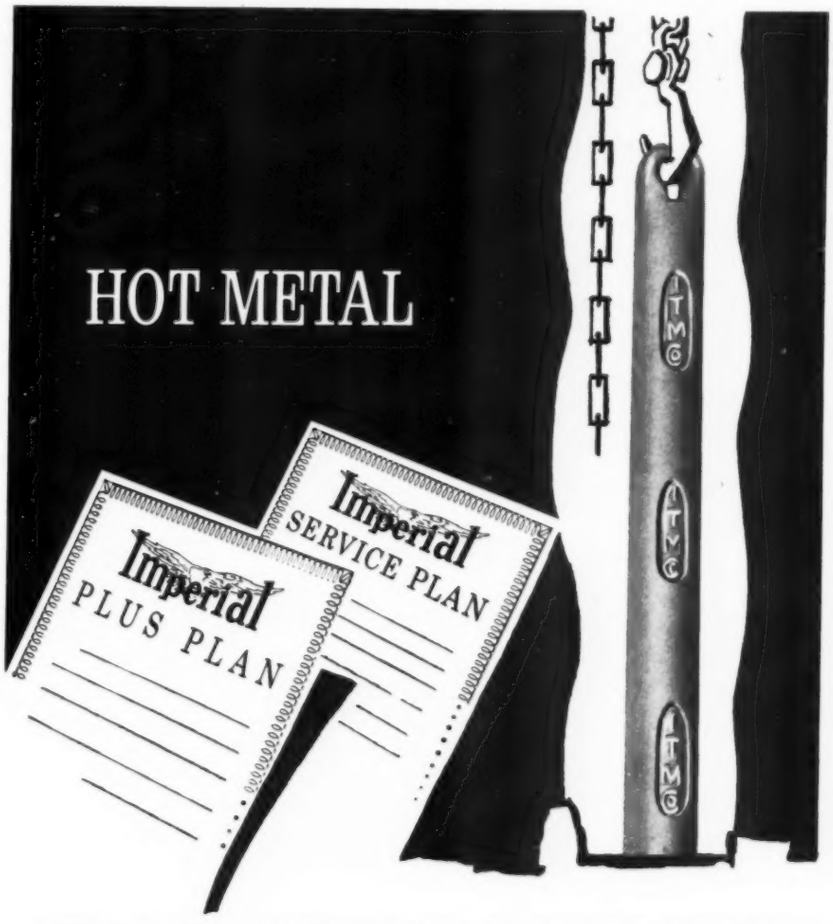
Platemaking:

Step and Repeat Device—This invention relates to an improved method and apparatus for preparing and positioning a transparency or image carrier in a step and repeat machine. The transparency is prepared so that accurate reproduction of several images and a high degree of registration between images is possible for color process printing. No. 2,983,049 by Albert Andrisani.

Reproducing Plates with Variable Reproduction Scale – For reproducing printing plates, the machine has a reciprocable copy table carrying the picture copy to be reproduced, a similarly reciprocable engraving table carrying a printing plate blank, a scanning head for scanning the picture copy and an engraving head for engraving the printing plate blank in accordance with the scanning head. No. 2,986,598 by Rudolph Hell, assignor to Dr.-Ing. Rudolf Hell Kommanditgesellschaft, of Germany.

Plate Etcher for Stereotype Work – This process and apparatus etches a plate in a single bite to a required depth so the plate will have lands with sloping edges for use in newspaper or stereotype work. A destructible, etchable link is inserted in a chain of mechanical elements and etching of the plate is arrested when the chain is interrupted by disabling of the link. No. 2,983,062 by Bernard F. Smith, assignor to Doro Corporation.

Electro-Sensitive Offset Plate—This invention provides for an electro-responsive recording blank which may have



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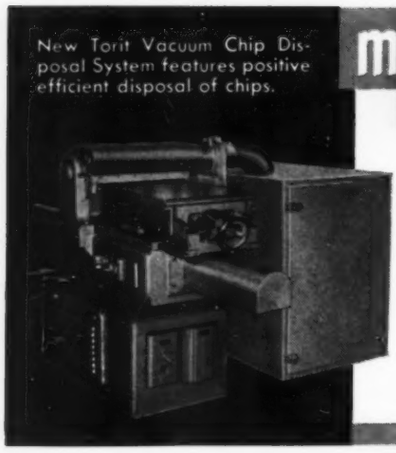

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an image produced thereon in response to the action of electric currents. The plate has an electrically conductive base coating, an electrically conductive intermediate coating of hydrophilic character and a resinous top coating that is water resistant. No. 2,983,220 by Harold R. Dalton and Murray Work, assignors to Timefax Corp.

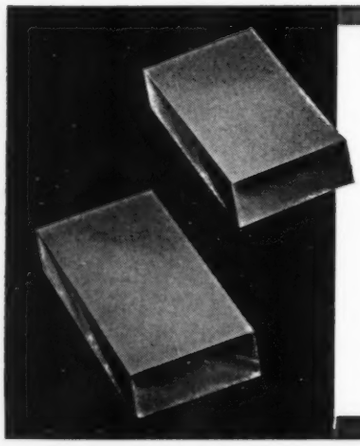
Offset Printing Plate—An offset printing plate with a cellulosic base or backing can record images either by electric voltages, such as facsimile electric signals, or mechanically such as by writing or typing. The plate coating contains an organo-titanium ester in which the ester group contains not more than four carbon atoms. No. 2,983,221 by Harold R. Dalton and Murray Wolf, assignors to Timefax Corporation.

Engraving Machine Variable-Period Drive—This variable-period drive pertains to equipment for electrical reproduction of images. More specifically it applies to an apparatus in which the reproduction may selectively be an enlargement or a reduction of the original image, and in a selectable ratio in either case. No. 2,983,785 by Samuel W. Levine, assignor to Fairchild Camera and Instrument Corp.

Automatic Stereo Plate Caster—From four to five plates per minute may be cast and finished automatically with one operator. The machine will cast plates continuously in any desired number from a single matrix, move the freshly cast plates to an inspection station and then to and through the plate trimming and cooling machines and then to the discharge conveyor without handling by the operator. The operator at the inspection station is provided with a control button to stop the machine if the plate is imperfect; or, in case of emergency the button may be depressed to stop the machine. Patent 2,985,925 by Paul L. Tollison, Charles L. Ricards and Samuel Oderman, assignors to Wood Newspaper Machinery Corp.

GPO Prints Three Millionth Patent—U. S. Public Printer James L. Harrison (left) delivers to Patent Commissioner David L. Ladd a copy of the *Official Gazette* which shows the three millionth patent issued by the Government. The Government Printing Office has been printing patents since 1861.

Electro-optical Scanner for Color Reproduction—The color reproduction apparatus comprises an electro-optical scanner, a correction path including a circuit in which at least one electric signal from the scanner representing a correcting color is subtracted from an electric signal representing a color to be corrected. There is a nonlinear circuit for receiving the output signal from the subtraction circuit and having an input-output characteristic in which the gain is reduced as the input increases, thereby providing an uncompensated nonlinearity in the correction path. Brightness of the light source varies with the output of the nonlinear circuit and is arranged to expose a pho-



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tographic emulsion which will provide the printer for the given color. No. 2,987,571 by G. S. J. Allen and David Harry Mawby, assignors to J. F. Crosfield, Ltd.

Photoengraving Machine – This automatic photoelectric engraving machine is of the variable enlargement and reduction type for reproducing flat copy upon a sheet wrapped about a continuously rotating cylinder. The rays proceeding from the flat copy are maintained in focus on the photoelectric cell, regardless of the enlargement or reduction for engraving the sheet in accordance with the tone value of the subject matter being scanned. No. 2,987,573 by Frederick P. Wilcox and Robert N. Hotchkiss, assignors to Fairchild Camera and Instrument Corp.

Printing Presses:

Automatic Sheet Paster—This invention provides a pasting machine for use with a printing press for applying adhesive to edges of a selected number of sheets in coordination with the delivery of sheets to the delivery station. It is attached directly to the delivery arms of the press and operates in unison and synchronism with the press. No. 2,982,979 by Charles R. Patterson.

Ink Fountain Agitator—This agitator is partially supported by the axle of a rotating and reciprocating application roller on a press. It operates by means of the reciprocating movement of the application roller alone. The agitator maintains ink in the fountain in a semi-fluid state without the necessity of an additional motor to drive the agitator. No. 2,983,222 by Edward J. Bakalars.

Paper Roll Paster Speed Matching System—The object is to provide equipment for obtaining accurate speed matching of a power driven incoming roll with the web running to the press from an expiring roll by means based on the synchronous tie or power selsyn principle of wound rotor motors. No. 2,983,458 by Edward J. Flannery, assignor to R. Hoe & Co., Inc.

Printing Press Tension Device – This device is related generally to tension control of an elastic or semi-elastic strip being drawn off a roll and into a printing press. More particularly, the device concerns apparatus for finely or closely controlling the strip tension so printed impressions will be accurately located on the strip. No. 2,983,464 by Charles E. Fuller.

Rotary Press Web Control—Control of the web through the printing unit or units is obtained primarily by arrangement of the coacting blanket cylinders so that the cylinder gaps do not coincide during the printing operation. No. 2,986,085 by Thomas H. Johnson, assignor to The Cottrell Company.

Antifriction Eccentric Mounting—This is an anti-friction eccentric journal mounting for a rotatable member. Provided is an easy eccentric adjustment or shifting of the rotatable member while at the same time insuring rigid support and positioning accuracy of the rotatable member, with the application of minimal power in all adjusted positions and while being shifted from one position to another. No. 2,986,086 by Carl O. Siebke, assignor to Miller Printing Machinery Co.

Vertical Press Rotation Counter—The primary object is to provide a rotation counter for the impression cylinder of Vertical printing presses. The counter is mounted on the press remote from the cylinder in a fixed position for operation in response to cylinder rotation into full cycle position and its upward movement, so that the counter may be read easily by the operator at a safe

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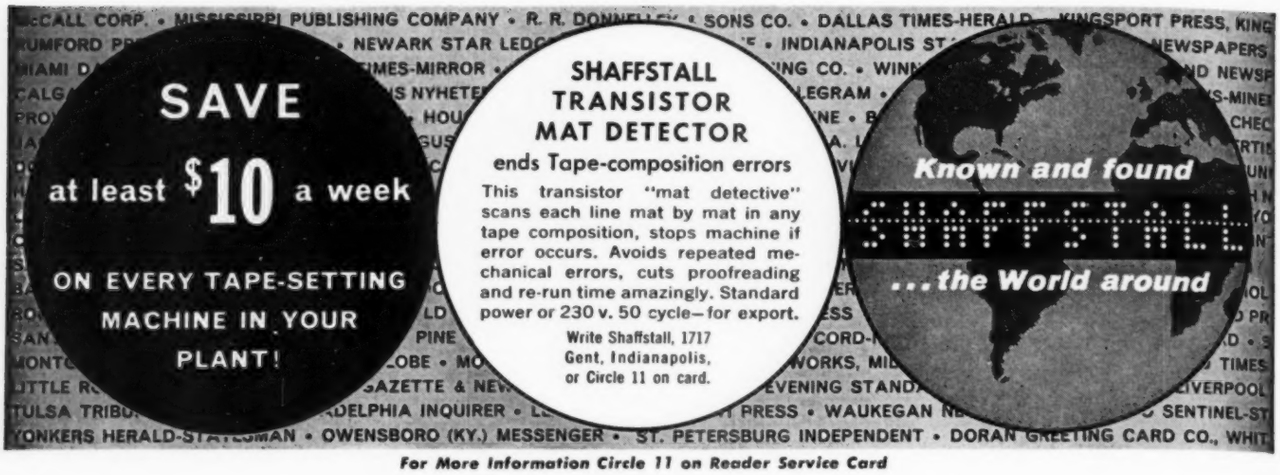
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distance from the press. No. 2,986,087 by Joseph F. Garito, Harold J. Foster and Lloyd E. Tiffany.

Inker for Rotary Press—Ghosting and ink starvation on a rotary press are eliminated by this inking arrangement. It is one of the objects of this invention to provide an inking arrangement in which the ink may be applied directly to the form roller by the ink feeding device or fountain assembly without necessity for passing the ink film through an extended series of rollers and drums. No. 2,986,088 by Corson Walter Chase and Frank Joseph Doyle, assignors to Miehle-Goss-Dexter, Inc.

Offset Press Plate Moistening Device—Improvement in the spray type offset plate moistener is effected by arranging the bristles of a rotary brush and deflector member so that the plate to be moistened receives an oscillating spray jet and the moistening action is much more regular. No. 2,986,337 by Maurice Ch. Clare.

Sucker Bars—For printing presses, paper converting machines and the like, detachable suction tip devices are provided that can be releasably attached to the suckers or sucker bar for making it possible for the sucker bar to pick up light stock without the leading edge drooping. No. 2,986,392 by Artur Buttner, assignor to Schnellpressenfabrik Aktiegesellschaft Heidelberg, Germany.

Interchanging Press Cylinders – A means is effected for rapid interchange of one printing cylinder with another in a printing press. Included is an improved cylinder mounting. No. 2,986,997 by Julius Schmutz, assignor to Schmutz Manufacturing Co.

Running Web Tension Control – This mechanism is intended to be useful with or as a part of a web winding machine. The object is to maintain a substantially constant tension in the web being run from a payout roll to a take-up roll to permit processing of the web as it moves between the two rolls. No. 2,983,463 by Charles Aaron and Leonard Rockstrom, assignors to Cameron Machine Co.

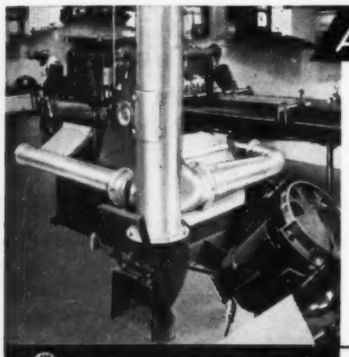
Bindery-Mailroom:

Bundle Aligning and Spacing Apparatus—This invention is related generally to conveying equipment, particularly to apparatus for automatically aligning and spacing bundles moving in single file. Apparatus is provided for aligning the bundles transversely of the conveyor prior to discharge from the conveyor. No. 2,986,262 by Richard Powers, assignor to Philadelphia Bulletin Company.

Collating Machine – The underlying principle is to dispense sheets from various stations in timed sequence so that separate sheets from each station are laid one over the other in successive order and registry. No. 2,986,391 by Robert G. Walker, assignor to Halverson Products Mfg. Co.

Miscellaneous:

Web Fabricating and Registry – In a machine for singly or sequentially performing slitting, printing, cutting, or scoring operations upon web-like sheet material being fed through a machine, angular adjustment of one or more of the shafts with respect to its driving gear is provided to bring the operating member in proper register with the web-like material. No. 2,986,952 by Henry D. Ward, Jr., assignor to Koppers Company, Inc.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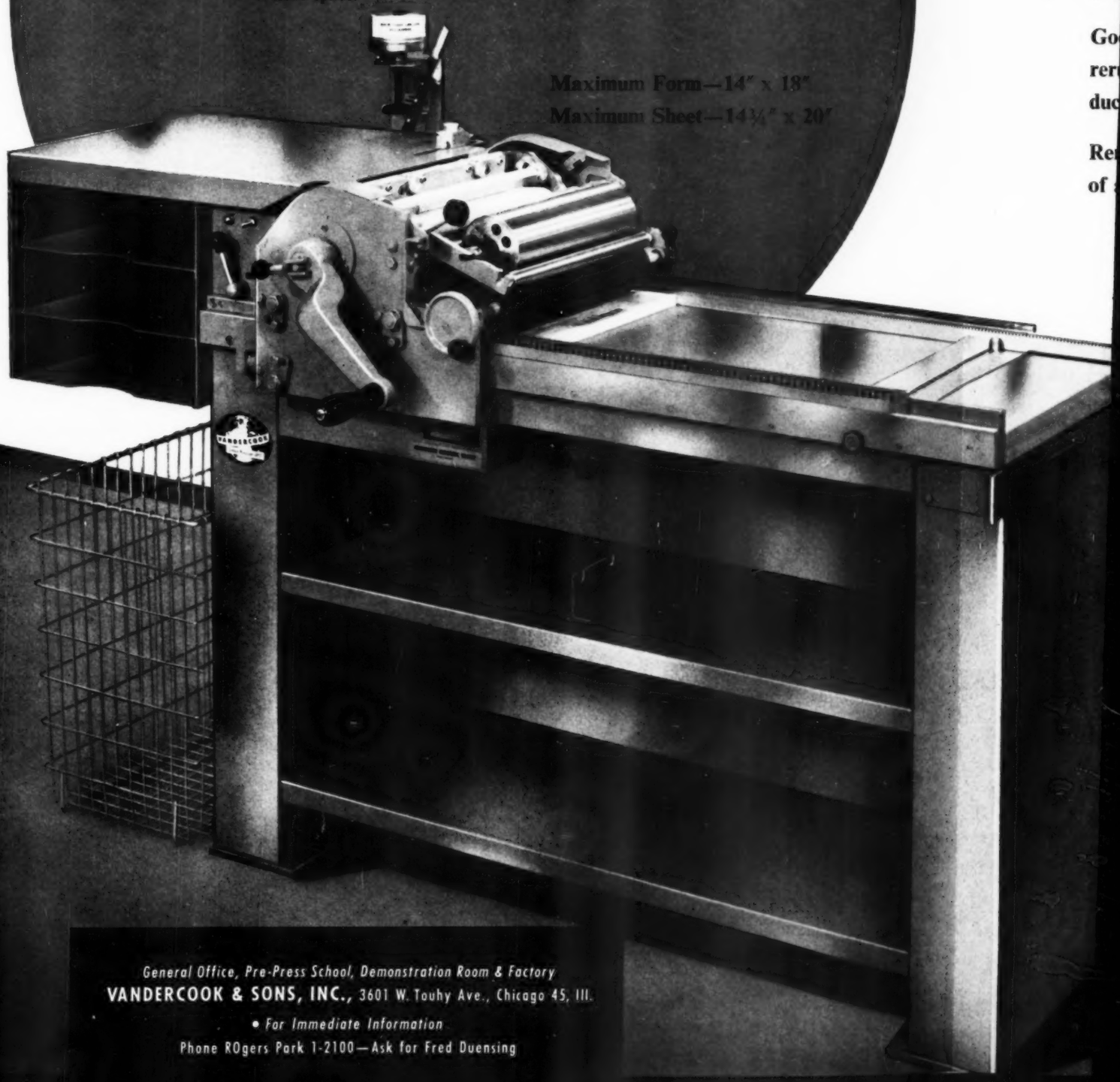

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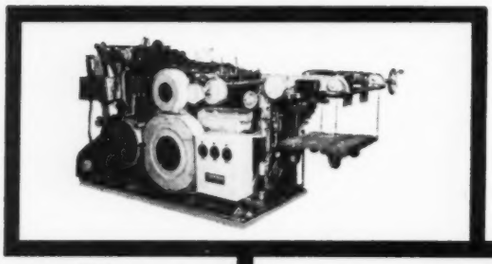

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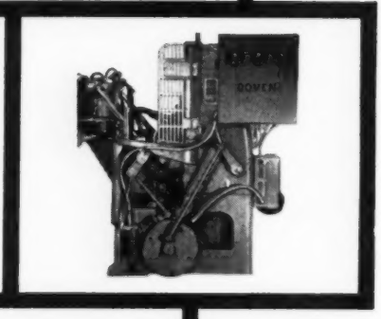

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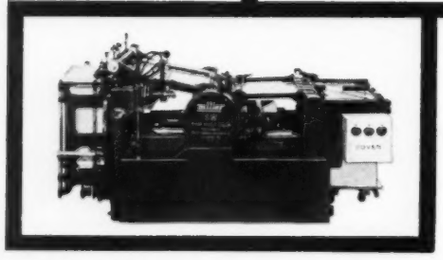

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Printing's Next Half-Century

(CONTINUED FROM PAGE 49)

brilliancy and sales appeal of the package. The future will also bring more beautifully printed transparent film and aluminum foil package wrappers for frozen and other food products.

In concluding this forecast, some developments which appear to be in the immediate offing can be mentioned. The printing industry will see an increasing amount of automation in offset, letterpress and rotogravure presses. The platemaking process as applied to web offset newspaper printing will also become automatic or semi-automatic.

There will be an increased use of computers and other electronic devices. The future will also see some further developments in powderless etching of copper photoengravings and three-dimensional printing.

The newly-developed Electrofax process, and water-base ink also show considerable promise in reducing the cost of newspaper printing. The prime objective, however, in water-base ink development is to eliminate objectionable ink ruboff.

The future of all three printing processes will depend much upon the amount of technological improvement incorporated in each printing method. If one process lags in this respect then the others will seize the advantage of taking away some of the work formerly handled by the laggard.

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As you read, circle the product numbers about which you want more information.
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① Name_____

② Title and Department_____

③ Company Name_____

④ Company Address_____

City_____ Zone_____ State_____

⑤ Average total employment in plant at this address:

- ☐ 10-19
- ☐ 20-49
- ☐ 50-99
- ☐ 100-249
- ☐ 250-499
- ☐ 500 or more

⑥ Check the ONE classification that most nearly describes your company:

PRINTER: (including commercial, trade and private plants)

- ☐ Letterpress Printer
- ☐ Lithographer
- ☐ Lithographer and Letterpress Printer
- ☐ Gravure Printer
- ☐ Flexographic Printer
- ☐ Screen Process Printer
- ☐ Letterpress and other printing, except Lithography
- ☐ Lithography and other printing, except Letterpress

TRADE PLANT:

- ☐ Composing
- ☐ Engraving (both Letterpress and Gravure)
- ☐ Lithographic Platemaking
- ☐ Engraving and Lithographic Platemaking
- ☐ Duplicate Platemaking (including electrotyping, stereotyping, rubber and composition plates)
- ☐ Binding
- ☐ Converting

NEWSPAPER:

- ☐ Newspaper with commercial printing department
- ☐ Daily newspaper, no commercial printing department
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Reader Service Department

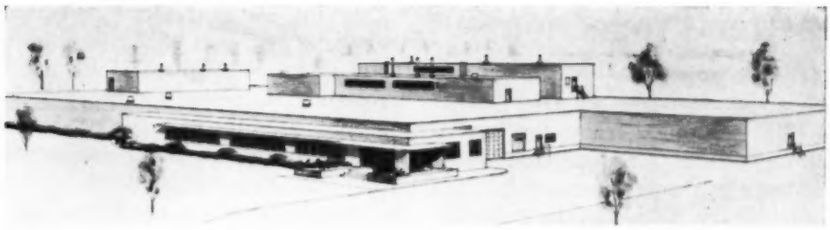
News Items

(CONTINUED FROM PAGE 16)

nounced. The new 48,000 sq. ft. plant, located just outside the Wall St. area, features modern commercial printing facilities. The move represented a 70% increase in Brown & Co.'s production capacity and cost nearly $1 million, according to Stanley.

Baker Joins Public Relations Firm—Frederic W. Baker, for the past six years public relations manager of Harris-Intertype Corp., will fill the newly created post of assistant to the president at Ronald Goodman Public Relations Counsel, Inc., Chicago. After joining Harris 12 years ago, Baker became advertising manager in 1954, and was named the company's first public relations manager in 1955.

Speedlight Forms Canadian Affiliate—Harry L. Parker, president of American Speedlight Corp., has announced the formation of a Canadian affiliate, Ascor of Canada, Ltd. Speedlight manufactures Ascorlight electronic flash equipment for the photographic field, and Ascorlux and Ascorlume lighting equipment used in Graphic Arts.



Di-Noc Opens Huge Photo Products Plant—A new manufacturing facility for photographic products was dedicated last month in Honeoye, N. Y., by Di-Noc Chemical Arts, Inc. According to Frank Sweet, executive vice president and general manager, main product of the plant (shown in architect's sketch) will be Graphic Arts films and plates. The company also maintains a plant in Cleveland.

Helpful Literature

(CONTINUED FROM PAGE 34)

tables, which are now available as a separate item. A price list for Hulen products is also available. CIRCLE NO. 318 ON READER SERVICE CARD.

PAPER FLAW DETECTORS

A pamphlet describing Inspectasort and Inspectalarm paper inspection and sorting equipment is being offered by the Kohler Coating Machinery Corp. Purpose of the equipment is to discover flaws in paper before it can cause trouble on the press. CIRCLE NO. 313 ON READER SERVICE CARD.

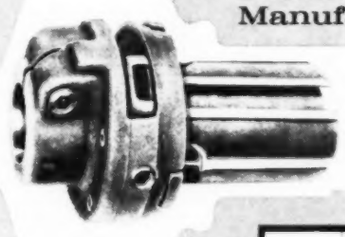
MEAD PAPER SAMPLES

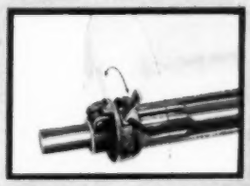
A book containing samples of all weights, and a list of all sizes of Process Plate letterpress enamel paper has been issued by Mead Papers, Inc. A full color process reproduction is included to show the fidelity of the coated sheet. CIRCLE NO. 321 ON READER CARD.

DISCUSS ADHESIVE PROBLEMS

An illustrated booklet with suggested solutions to difficult adhesive problems and listing new adhesives, coatings and chemical compounds for a variety of industrial applications is available from Adhesive Products Corp. CIRCLE NO. 306 ON READER CARD.

Precision Manufactured





Really LOCK Paper Rolls with Valley Efficiency Chucks

Efficiency Expansion Chucks are available for either fiber or steel cores up to 12" in diameter, for shafts of 1" to 3 1/2" in diameter and in size graduation of 1/16". Your order is custom machined to a close tolerance so that you get a perfect fit. It won't slip — ever. Unwind, rewind or brake easily. In one operation lever the cam and lock it. Chucks are interchangeable — no rights or lefts. Gives years of service — made of malleable, high strength castings. Surfaces which contact core are all precision machined. Lever applies powerful force to the expansion jaws. Rib jaws bite firmly into core, eliminating core slippage when starting or changing speeds, even under extreme brake tension.

Write Dept. P for free illustrated literature and other pertinent details.

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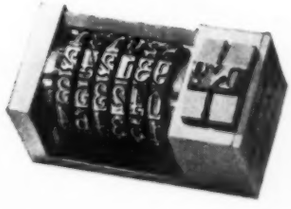

New! You use fingers only to take apart this simplified Roberts Royal type-high unit for cleaning, or replacing skip wheels.

Roberts rotary heads, straight or convex, are designed for high speed, with no outside arm. All working parts are inside the steel wheel-case walls for greater rigidity under high speed runs.

Write or call Roberts Numbering Machine Division, Heller Roberts Manufacturing Corporation, 700 Jamaica Avenue, Brooklyn 8, N. Y. Telephone Midway 7-4600.

For More Information Circle 91 on Reader Service Card

Better Production

(CONTINUED FROM PAGE 78)

He continued that the wrap-around process has permitted the letterpress printer to move into the semi-rotary field. Dr. Rogers estimated about 40 wrap-around presses are operating in the country today and stated that this process is helping to completely revolutionize the letterpress industry.

Smith added that wrap-around plates were becoming easier to obtain although he suggested buying negatives from outside supply houses and making the plates within the plant. A cost of about $6000 was estimated by Smith to add the Dycril process to a regular litho plant. Equipment needed would include arc lights, conditioning cabinet, washup unit and exposure vacuum frame.

Among the questions presented at the litho seminar was one asking how to put down a good coverage of solid gold ink on Kromkote cover stock? It was suggested that the same sheet be printed twice with the gold ink without too much time elapsing between each pass of the stock through the press. It was noted that offsetting was aggravated the second time through the press due to the second ink layer not having had time to become set.

Another member of the audience reported a fair degree of success with a paste type of gold ink when used with a special fountain solution. Still another suggested using a coarse grained plate which would hold piling to a minimum.

What can be expected from wipe-on presensitized plates? It was pointed out that presensitized plates are more critical than grained plates because they are of a smoother quality. The thin layer of image holding material on the plate will wear off faster than on other types of plates. It was also mentioned that metallic inks are hard to use with presensitized plates and as the plate to blanket pressure is increased the number of obtainable impressions will decrease. Another seminar participant suggested building up the image strength with a second application of lacquer provided enough diazo remained on the plate's surface.

It was suggested that a coat of lacquer be applied to a new press blanket each time it is cleaned to give longer blanket life and reduce tack. How critical is the pH of a fountain solution to the life of a presensitized plate? It was stated that if the acid is too strong, plate image areas are broken down and the drying time of inks are reduced.

Salesmen Cost Dollars

(CONTINUED FROM PAGE 41)

Plant superintendents agree, too, that a salesman can save both his company and customer money by getting together with the customer and artist before a job is started to decide exactly what is wanted and how it can be done. There should also be consultations with the engraver or the platemaker before a job is started—another cost saving technique.

All plant superintendents interviewed expressed a willingness to assist the salesman in every way possible. However, they felt that neith-

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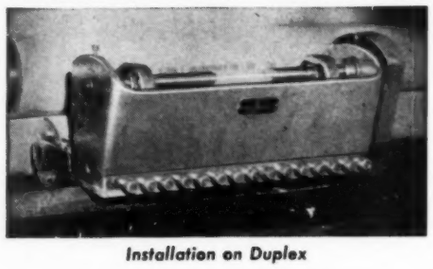

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- **Easily operated and easily maintained**

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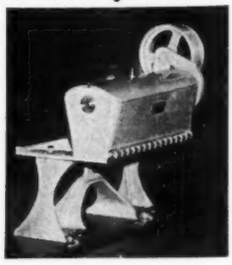

Installation on late model Goss Headliner

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er they nor their foremen should be required to make layouts for the salesman, regardless of whether the plant had a layout department or not.

All of the larger plants visited used one system or another to promote closer cooperation between sales and production. The primary purpose is to cut production costs and insure maximum profits. It is true that no system, no matter how complicated, will eliminate human error, carelessness, laziness or ignorance.

A system used by William S. Henson, Inc., Dallas, has proved effective. The firm uses a 4 in. by 4½ in. memo sheet printed in red ink. At the top is a space for the job number and the salesman's name. Below this, in larger type, is printed the words: Instructions Incomplete.

This memo is known as a buck sheet, according to C. G. Morris, plant superintendent. Every job ticket written up by a salesman goes directly to Morris' desk. He checks it over carefully for errors and for incomplete information.

If there is any question about the job in any way, Morris will make his notes on the buck sheet and attach it to the job ticket. The ticket goes immediately to the salesman's box at the front desk. Then when the salesman phones in, the receptionist at the front desk takes the ticket out of the salesman's box and asks for the missing information. When the ticket is completed it goes back to Morris' desk and from there to production.

The buck sheet eventually is sent to the sales manager's desk. He in turn uses these sheets in his monthly sales meetings to further improve cooperation and efficiency between the sales and production departments. "We use this method," Morris was careful to explain, "not as a means of making it tough for any individual person. We are careful at all times, not only in sales but in all other departments as well, to place emphasis on constructive criticism for the benefit and profit of the entire organization."

The above statement sums up the attitude and opinions of most other superintendents interviewed – that the emphasis be placed on constructive criticism for greater cooperation between production and sales in order to improve the profit picture for the entire organization. ⊙

'Going Offset' Survey

(CONTINUED FROM PAGE 43)

was reported greater by 58% as compared with offset. "Cheap labor" is used by 66% of the publishers in the composing room. However, the cost of camera work is reported to be a great deal higher and requires more skill.

The average cost of offset equipment was $36,500, Terry reported. Extremes ran from $10,000 to $135,000. Proceeds from the sale of discontinued letterpress units averaged $8730. In the survey, 30% of the publishers reported that they had considerable letterpress equipment on hand which could not be sold, including typesetting equipment, presses and folders.

Improved working conditions are claimed by 90% of the publishers, Terry reported. The work is less weighty and dirty. A superior product is produced by offset, according to 92% of the replies. Although offset speed is considered slower by 90%

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of the publishers, 80% claim an increase in operating profit due chiefly to the savings in composition. In a study of weekly newspapers who have segregated their departmental expenses, a general average of composing room costs to the total expense is about 22½% of the total. Whatever savings there are would relate principally to this 22½% cost. All other departments are effected very little by the changeover except where editorial and business staff make up their own pages.

Increased profit was reported by 80% of the publishers. Chief saving is in the composing room, and is estimated to run anywhere from 0% to 51%, according to Terry's study. ⊕

Offset Web Controls

(CONTINUED FROM PAGE 53)

Since the web is unprinted before going into the first press unit, the side register can only be measured by utilizing the edge of the web. When the web has been printed the side register is compared to the print or fold rather than to the edge of the web, as this is sometimes trimmed. Therefore, the measurement of side register to print for folder or sheeter sidelay register is the most accurate.

The rotating lens scanning head can utilize a part of the printed pattern as a basis in measuring the side register of the printed web.

Another method of measuring the side error to the actual print has been in use for many years. A small diagonal mark is printed behind the cutoff register mark. The scanning head which controls the cutoff register, is also used to control the side register. The first mark to appear under the scanning head gives the measurement of cutoff error, and the second mark to appear gives the measurement of folder side error.

Principles of side register to print controls are illustrated in Fig. 10.

Correction Motors

In general there are two types of correction motors which are coupled to the register mechanism of a press. These are explained as follows:

1—Hydraulic Motors—A hydraulic motor is best suited to moving heavy loads quickly. This type of motor generally is recommended for very heavy reels when fast movement is required.

The main problem in this type of motor is that it requires an accurate and reliable oil compression system. Since the movement of the motor is dependent on the pressure of the fluid, a variation in pressure will change its rate of correction. All proportional controls require corrections at known increments or at known rates. If the pressure varies due to maintenance problems, inadequate filtering of the fluid, or temperature, the rate of correction will not be proportional to the error readings. Another problem is the system's vulnerability to motor failure. If the main hydraulic pump fails, all the hydraulic correction motors fail.

2—Electric Motors—Electric mo-

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tors will not move equally heavy loads as fast as hydraulic motors, but they can be accurate and reliable on light loads when properly installed.

The speed of correction is not as important as it might seem, since the corrective action on the web is not instantaneous. Rather, it follows an exponential curve of correction. Even if a compensator roller was moved instantaneously, it would still take a number of revolutions of the press for the correction to be completed on the web. A few tenths of a second is not as important as it may seem.

The correction rate of the electric motor is fixed with its reduction gear box. It will not vary from the present rate. If a motor fails, only one correction device is out of commission—not the entire system.

When equipped with suitable braking devices, electric motors provide accurate proportional corrections. These motors are generally cheaper to buy, install and maintain. These motors are recommended for remote manual push button controls, as well as for the automatic offset press web control system.

3—*Emergency Operation of Correction Device*—When automatic controls are installed, these controls measure an error, and then correct the error. Since these systems can break down, it is essential to make sure that the press will not be shut down due to a control failure, or a motor failure.

The installation of some sort of emergency handwheel clutches is recommended in case of control or motor failure.

The problem of installing controls on an offset press is not as complicated as it may seem. Once the decision has been made to automate the press, the choice of control systems and the amount of controls required becomes a purely economic matter.

In general, it can be said that automatic controls pay for themselves in a short time, and increase profits and quality.

Web offset is following the path established by the other web processes in order to compete on a favorable basis. ⊙

(*Concluded*)

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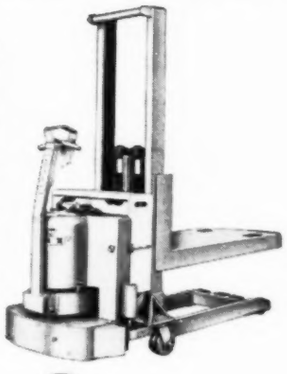

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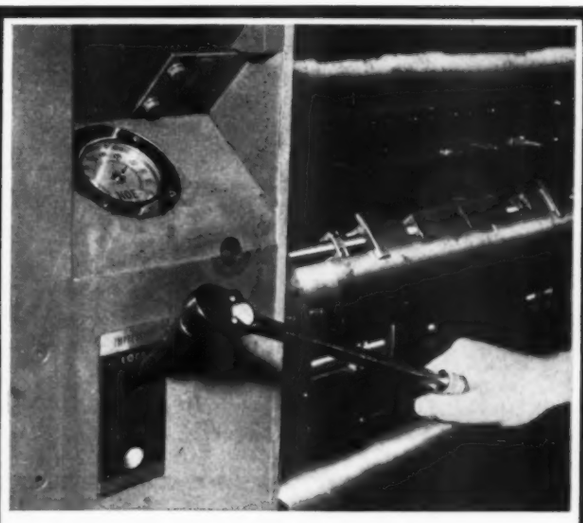

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NOVEMBER 1961

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13 Graphic Arts Executives Serve with Carnegie Tech

Thirteen nationally prominent persons in the field of Graphic Arts have agreed to serve on the visiting committee to the Dept. of Graphic Arts at Carnegie Institute of Technology.

The committee's principal function is to counsel with the faculty to help in achieving the department's objectives. Each member has substantial experience in one or a combination of the three areas in which the work of the department focuses: Graphic Arts management, Graphic Arts design, and Graphic Arts scientific technology.

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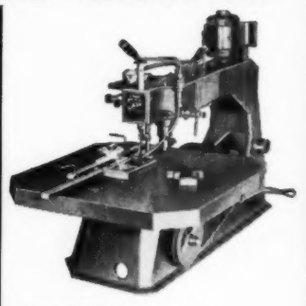

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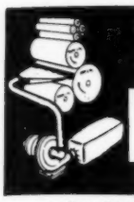

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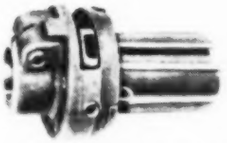

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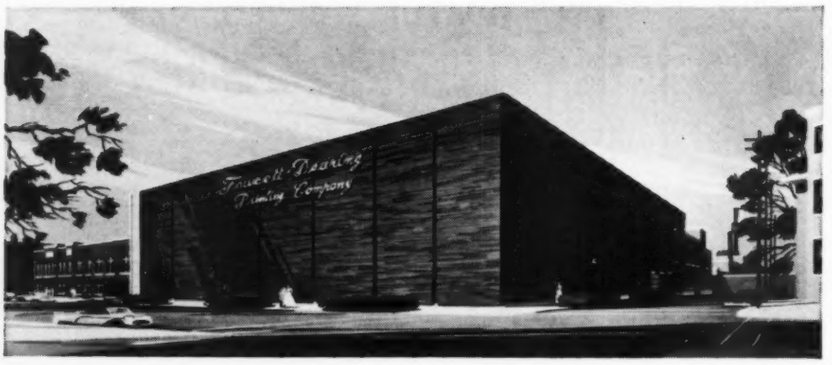
Grand Central Exhibition – Left to right are Edward D. Wilson, president of Metropolitan Lithographers Assn., model Stacie Gray and Edward Swayduck, president of Local I, Amalgamated Lithographers of America, at opening of a union sponsored display to promote the lithographic industry. The exhibit in New York's Grand Central Station features press runs on a Harris two color press.

GRAPHIC VIEWS

of the Printing Industry

Electronic Engraving Installation—The West German designed and manufactured Vario-Klischograph is shown in operation at Mowbray Engraving Co., Providence, R. I. The firm uses the electronic engraving machine for making four color engravings for magazine covers and for editorial illustrations.



Fawcett-Dearing Plans Addition—Joseph A. Eaton, president of Fawcett-Dearing Printing Co. of Louisville, Ky., has announced plans for an addition (shown above) to the plant. The addition will make floor space available for letterpress, offset and gravure facilities.

Stereo Plate in Use a Century—In 1861 the first curved stereotype plate was successfully used for daily newspaper production. Made by Charles Craske for R. Hoe & Co., Inc., this plate created the New York *Tribune* edition shown. Richard Lewis (right), vice president and sales manager of Hoe, and Alexander E. Anderson, veteran production man of the *Herald-Tribune*, read a copy of the historic newspaper issue.

Beauty Promotes Wisconsin Show – Kay Ross, Miss March of Progress and women's editor of the weekly West Allis (Wis.) *Star*, pauses with Richard Leberman, executive vice president, Fakler Printing Co. Miss Ross reigned during the March of Progress exhibit in Milwaukee this month.

Litho Clubs President Visits Kodak – John Murphy (left), president of the National Assn. of Litho Clubs, and vice president of Lithomaster Co. Inc., Detroit, discusses methods used in color lithography with John McMaster, manager of Eastman Kodak Co.'s Graphic Arts sales division. The occasion was a visit to Kodak's Rochester, N.Y., plant.

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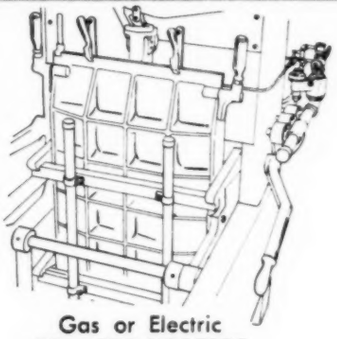

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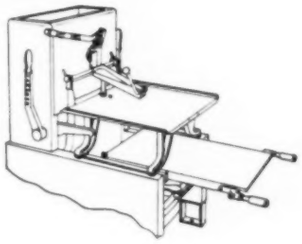

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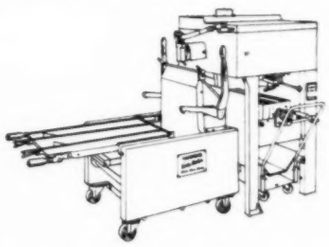

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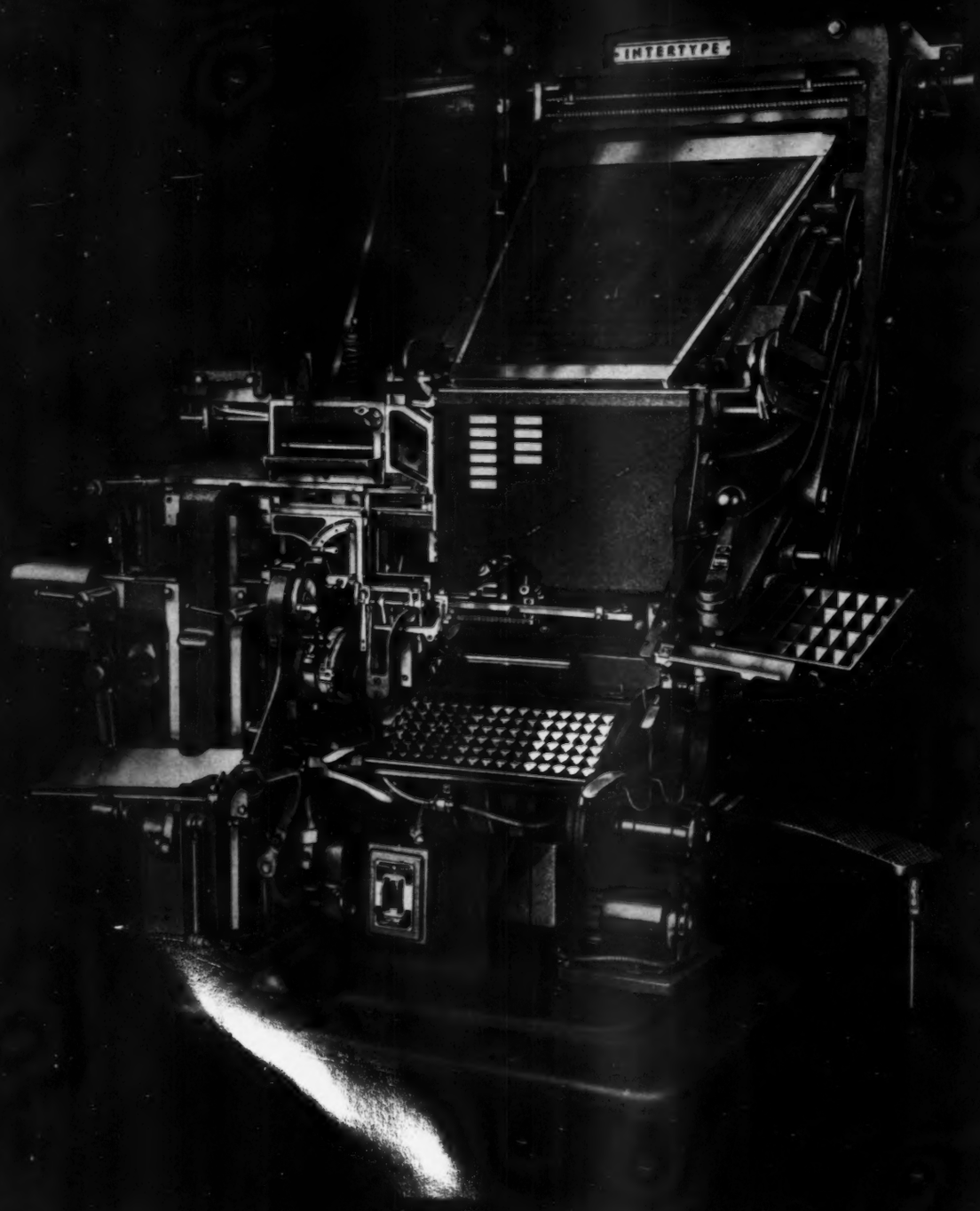
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